TEKNAEVO TPG

INSTRUCTIONS MANUAL EN

HANDBUCH DE

MANUAL DE INSTALACION ES

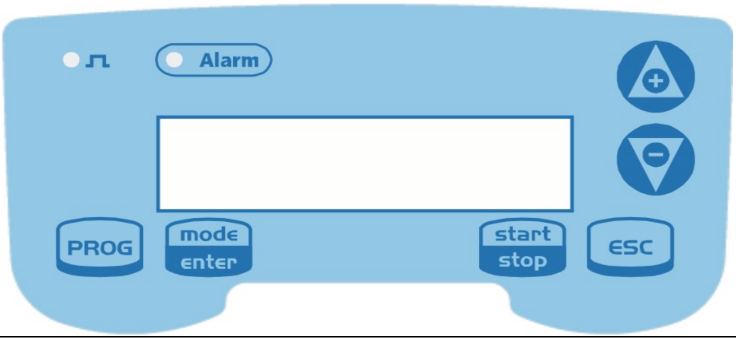
MANUEL D'INSTALLATION FR

MANUALE D'INSTALLAZIONE IT

MANUAL DE INSTALAÇÃO PT

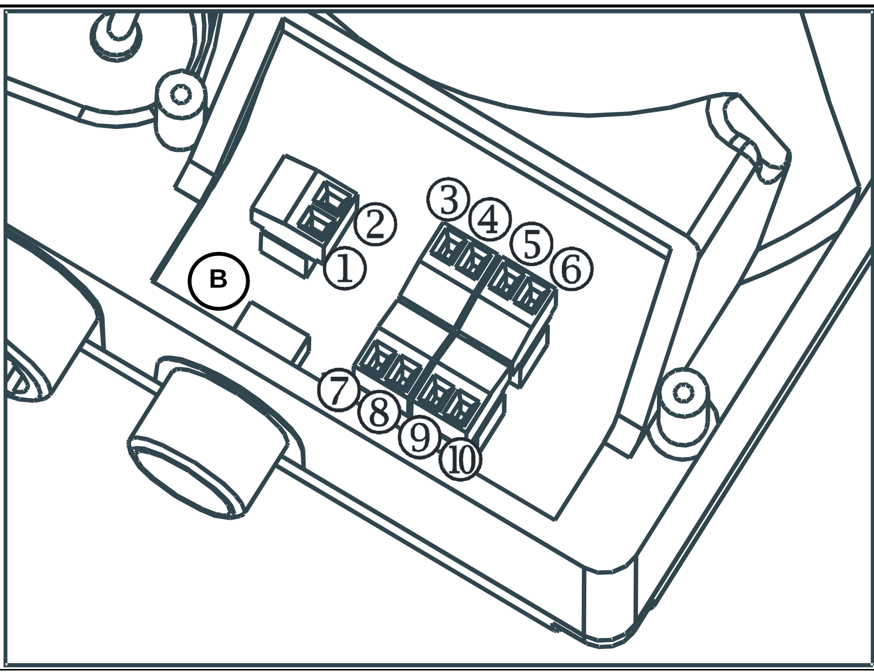
KULLANIM KLAVUZU TK

Control panel – TEKNA TPG



	Access to the programming menu
	When pressed during the pump operation phase, it cyclically displays the programmed values on the display; When pressed at the same time  or  keys, it increases or decreases a value dependent on the selected operating mode. During programming it carries out an “enter” function, meaning that it confirms entry to the various menu levels and modifications within the same.
	Starts and stops the pump. In the event of a level alarm (alarm function only), flow alarm and active memory alarm, it deactivates the signal on the display.
	Used to “exit” the various menu levels. Before definitively exiting the programming phase, you will be asked if you wish to save any changes
	Used to run upwards through the menu or increase the numerical values to be changed. Can be used to start dosage in Batch mode
	Used to run downwards through the menu, or decrease the numerical values to be changed.
	Flashing green LED during dosage
	Red LED that lights up in various alarm situations

Electrical connections



1	Alarm relay	
2		
3	Pole +	4-20 mA input signal Input Impedante: 200 ohm
4	Pole -	
5	-Remote control input (start-stop) -Pause signal input	
6		
7	-Frequency signal input (water-meter pulse-sender) -Trigger signal input	
8		
9	Flow sensor input	
10		
B	Input level control	

Programmiermenü Tekna TPG

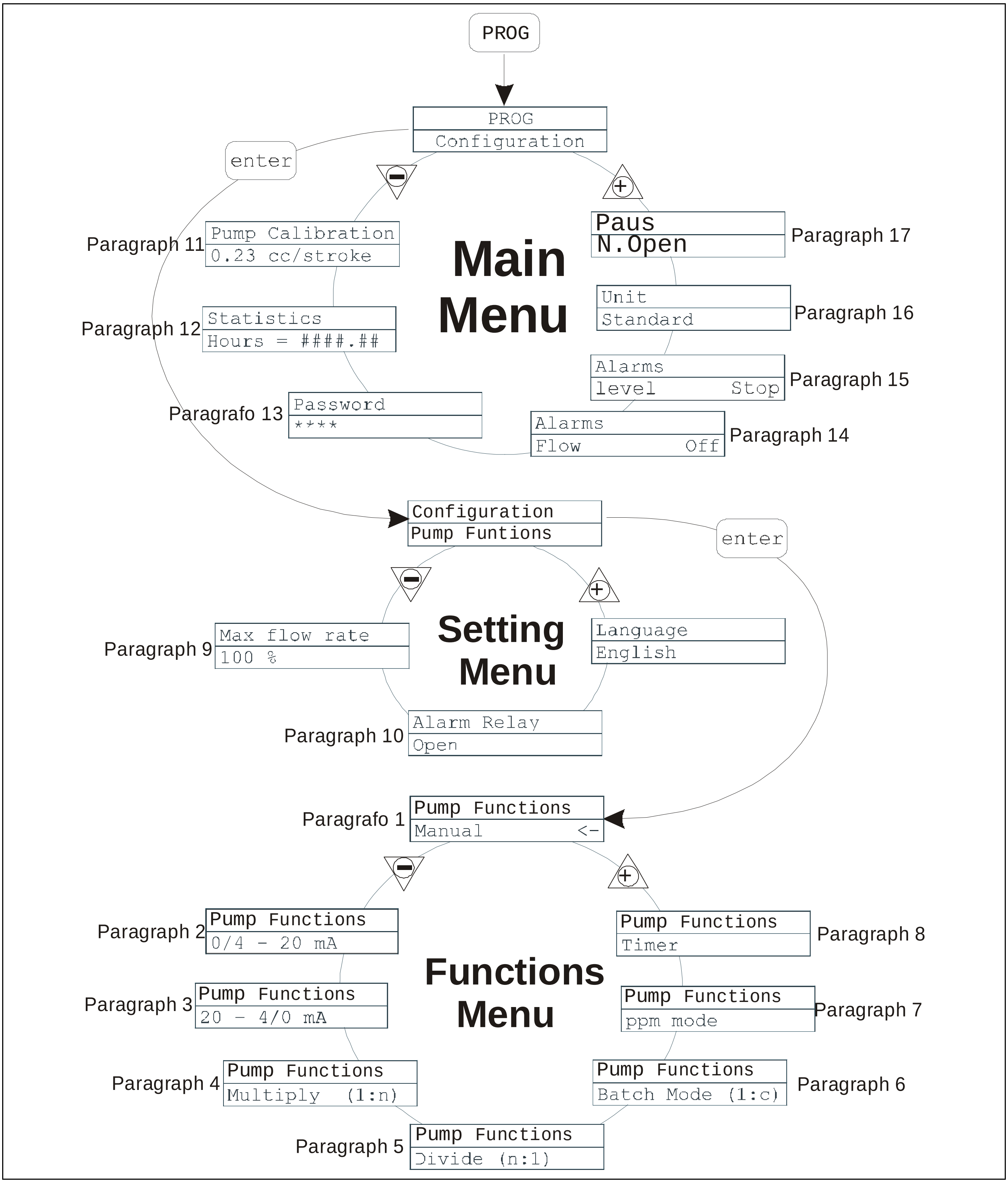
You can access the programming menu by pressing the PROG key for over three seconds. The ⊕ ⊖ keys can be used to run through the menu items, with the mode/enter key being used to access changes.
The pump is programmed in constant mode in the factory. The pump automatically returns to the operating mode after 1 minute of no activity. Any data entered in these circumstances will not be saved.
The ESC key can be used to exit the various programming levels. Upon exiting programming, the display will show:

Exit
Don't Save

∇ ∆

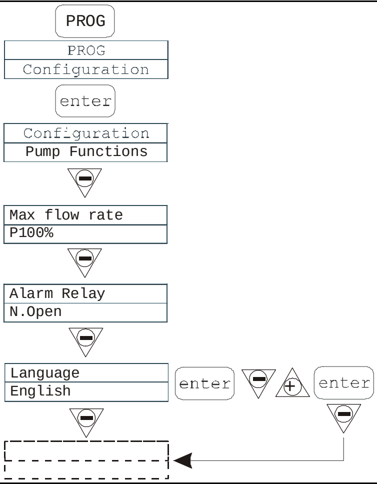
Exit
Save

mode/enter to confirm the selection



Setting the Language

Programming



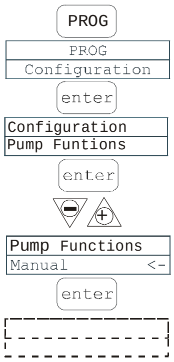
Operation

Makes it possible to select the language. The pump is set in English in the factory.

Changes can be made by pressing the key, then using the keys to set the new value. Press to confirm and return to the main menu

Paragraph 1 – Manual Dosage

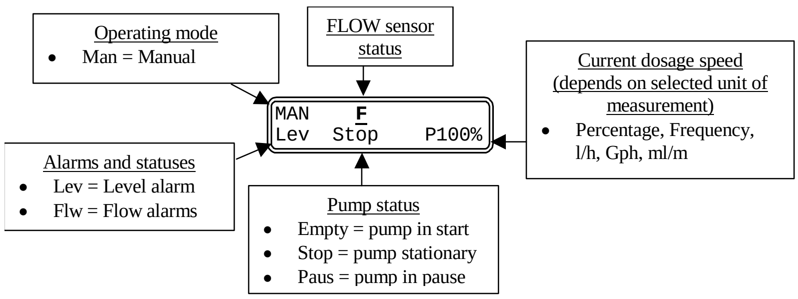
Programming



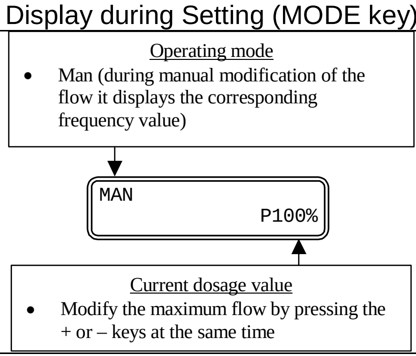
Operation

The pump operates in constant mode. The flow can only be manually regulated by pressing the keys at the same time to increase the flow, or the keys to decrease it.

Display during Operation

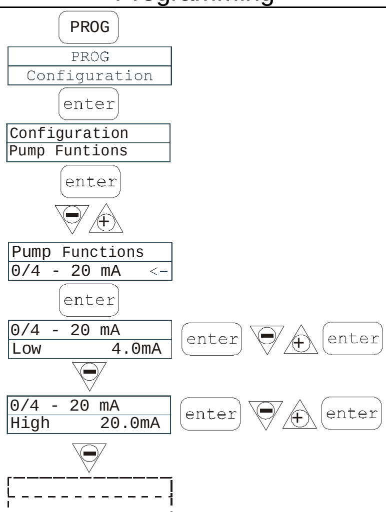


Display during Setting (MODE key)



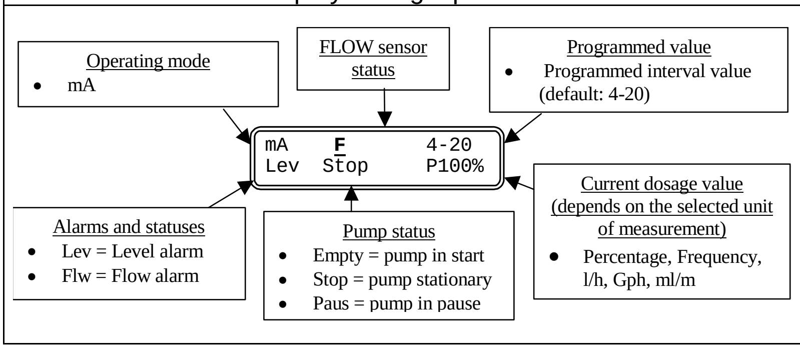
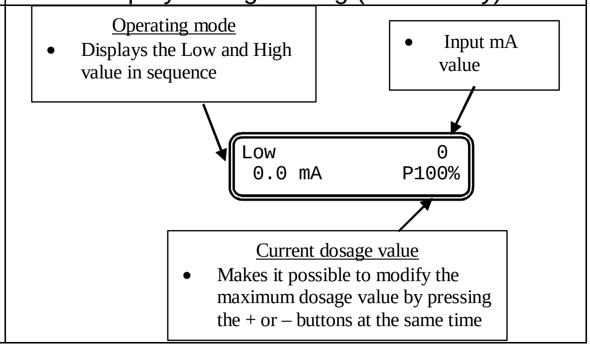
Paragraph 2 - Dosage Proportional to Signal 0/4-20

Programming

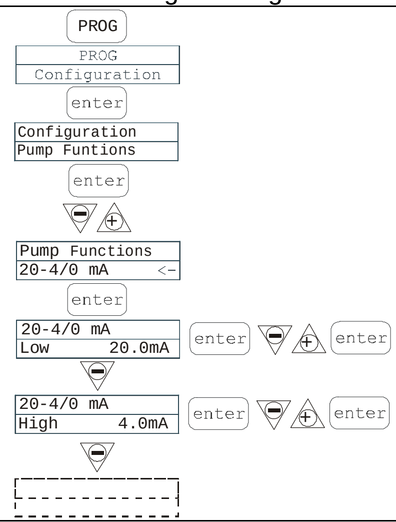


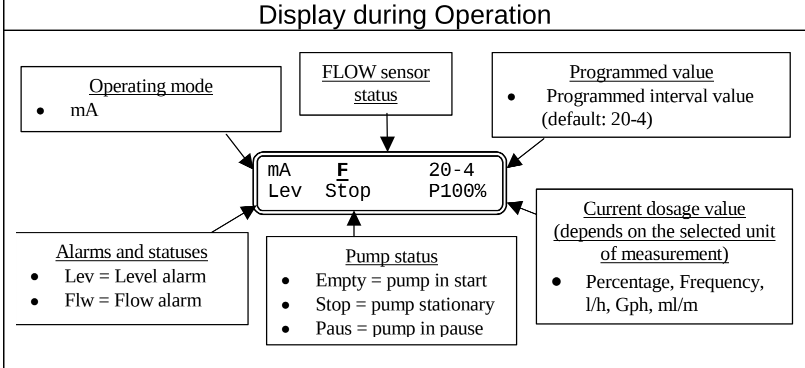
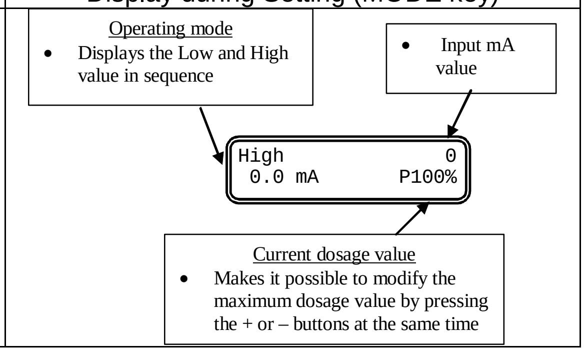
Operation

The pump proportionally doses at a signal of (0)4-20 mA. On the basis of the factory settings, the pump interrupts dosage at 4mA and doses at the maximum set frequency when it receives 20 mA. These two values can be modified during programming. The maximum frequency can be modified during operation, by pressing the keys at the same time to increase the flow, or the keys to decrease it.

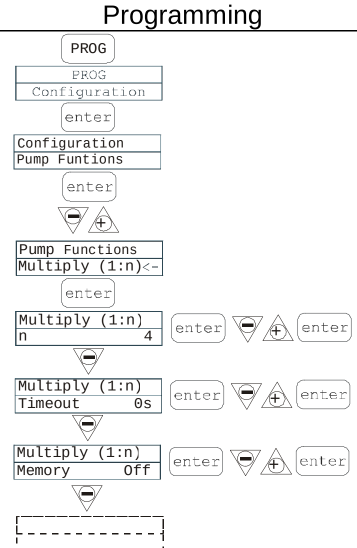
Display during Operation	Display during Setting (MODE key)
	

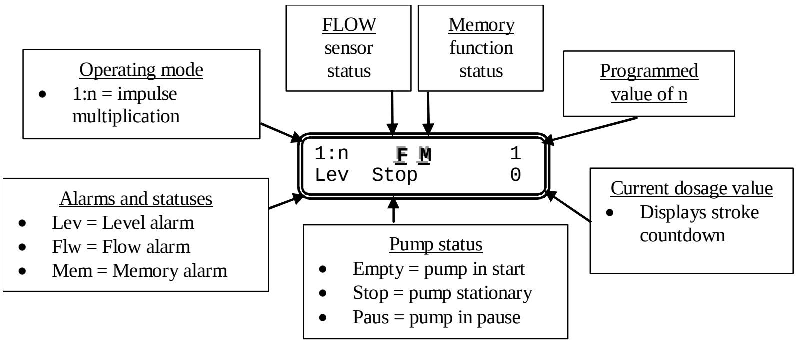
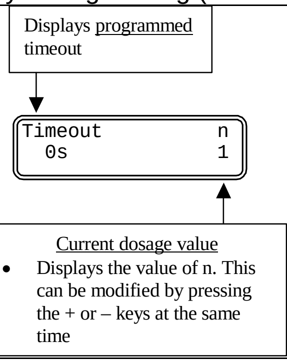
Paragraph 3 - Dosage Proportional to Signal 20-4/0 mA

Programming	Operation
	The pump proportionally doses at a signal of 20-4(0) mA. On the basis of the factory settings, the pump interrupts dosage at 20mA and doses at the maximum set frequency when it receives 4 mA. These two values can be modified during programming. The maximum frequency can be modified during operation, by pressing the mode enter ⊕ keys at the same time to increase the flow, or the mode enter ⊖ keys to decrease it.

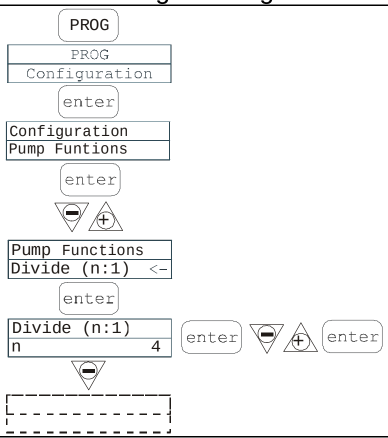
Display during Operation	Display during Setting (MODE key)
	

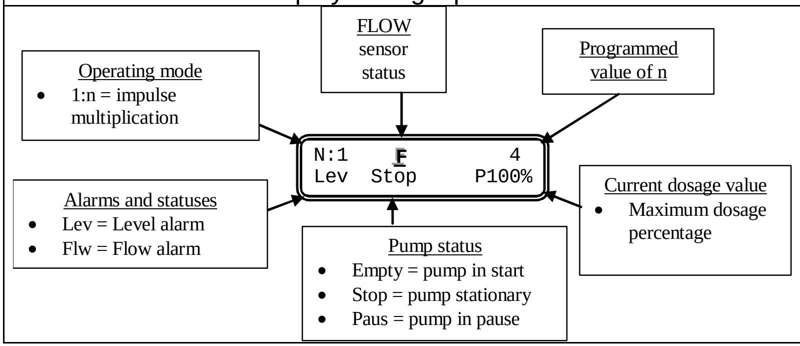
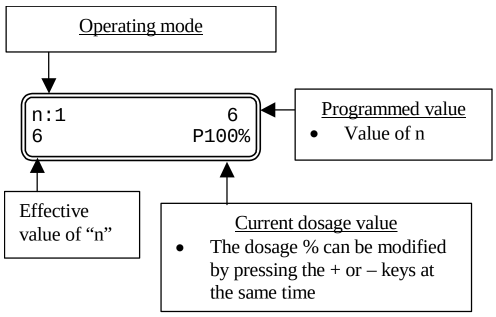
Paragraph 4 – Proportional to External Impulses (multiplication)

Programming	Operation
	The pump doses in proportion to an external signal (i.e.: impulse launch counter). With every signal received, the pump makes the programmed “n” number of strikes. The pump automatically sets the dosage frequency, adapting it to the time that passes between two successive signals. It is possible to set the time (timeout) in seconds, beyond which the pump resets the interval count in order to avoid dosages over excessively long times. The pump has a memory function, which signals the reception of a signal during dosage. If set to Off, it merely sends a signal, if set to On it sends a signal and memorises the impulses, then executes them when it has finished receiving signals. The value of “n” can be modified during operation, by pressing the mode enter ⊕ keys at the same time to increase the flow, or the mode enter ⊖ keys to decrease it.

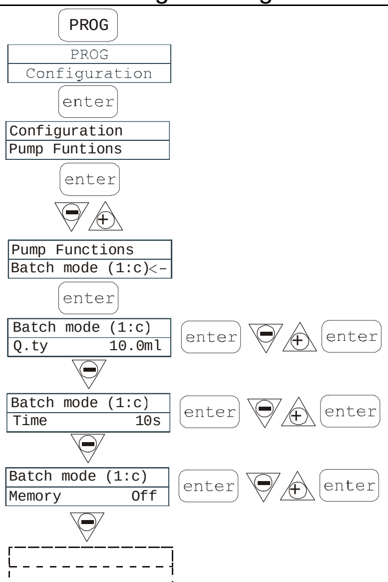
Display during Operation	Display during Setting (MODE key)
	

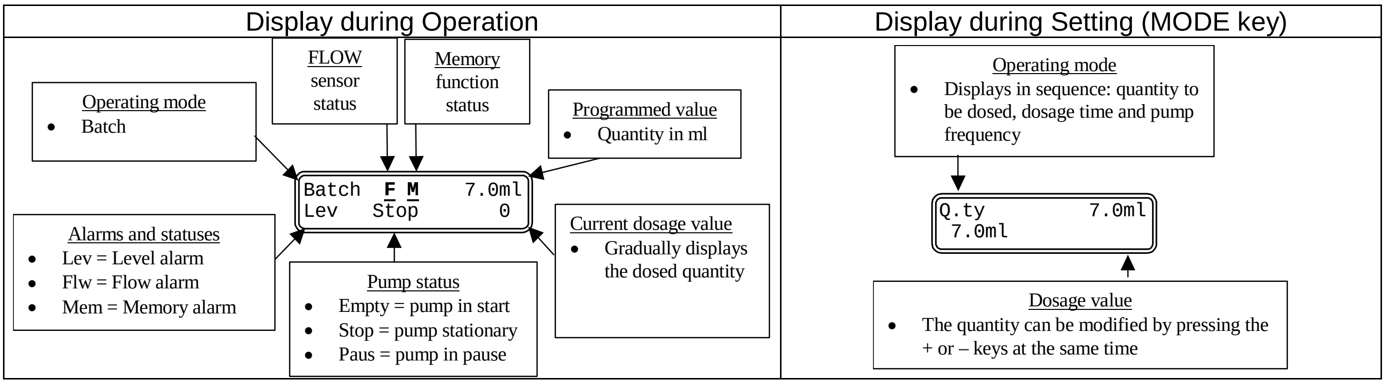
Paragraph 5 – Proportional to External Impulses (division)

Programming	Operation
	The pump doses in proportion to an external signal (i.e.: impulse launch counter). At every “n” signals, the pump makes a strike. You can set the value of “n” during programming. By programming the value of “n” you set the maximum dosage %. This value can be modified during operation, by pressing the mode enter + keys at the same time to increase the flow, or the mode enter − keys to decrease it.

Display during Operation	Display during Setting (MODE key)
	

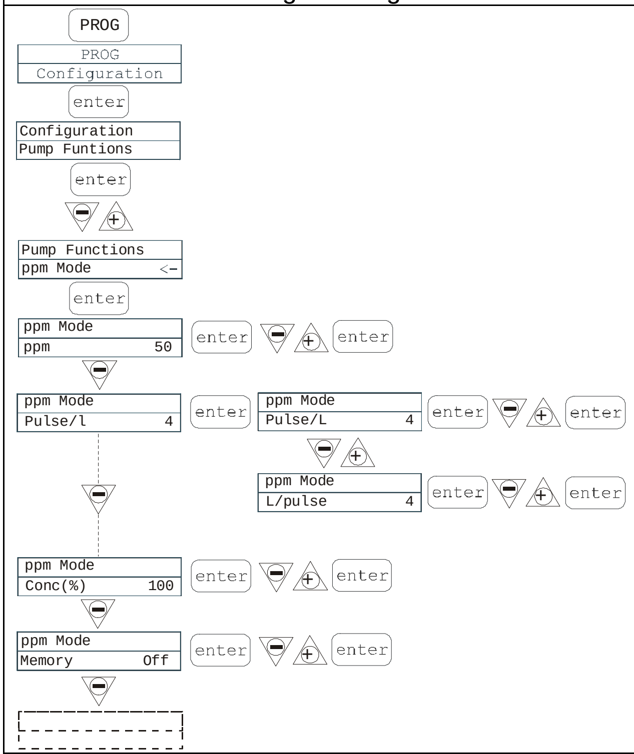
Paragraph 6 – Proportional to External Impulses (batch dosage)

Programming	Operation
	The pump doses in proportion to an external signal (i.e.: impulse launch counter). In this case, it is possible to set the quantity to be dosed in ml and the time within which to complete dosage. Dosage can be started manually by pressing the + key, or by using a remote control. The start stop key interrupts dosage, which can be reset by pressing the + key, or started again by pressing the start stop key again. The quantity to be dosed can be modified during operation, by pressing the mode enter + keys at the same time to increase the flow, or the mode enter − keys to decrease i.

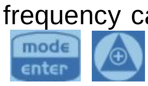


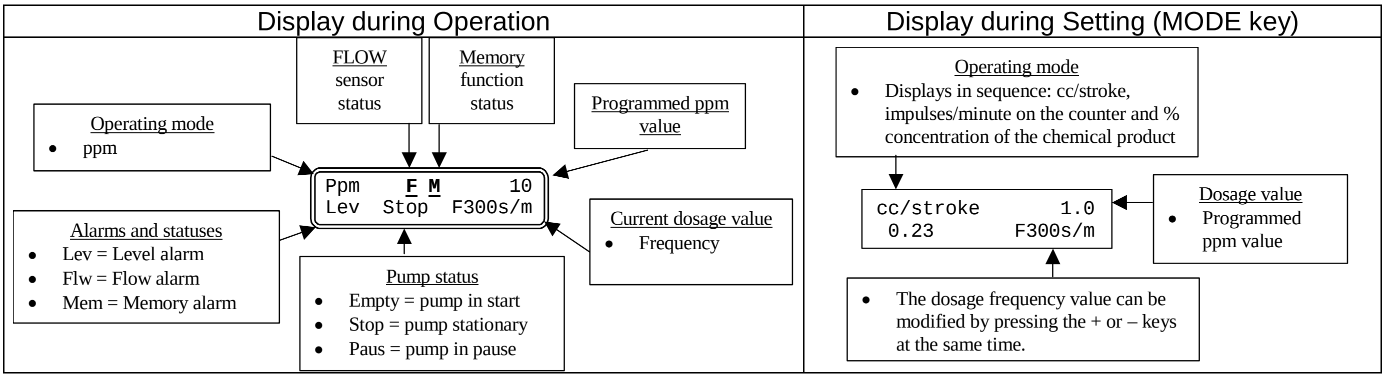
Paragraph 7 – Proportional to External Impulses (ppm dosage)

Programming



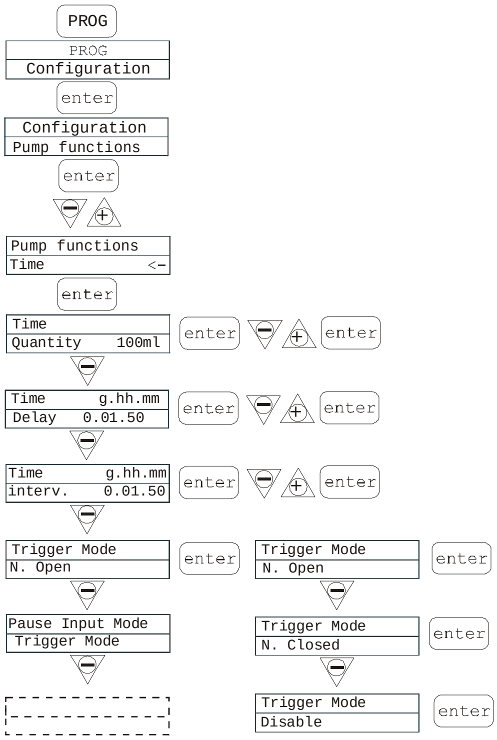
Operation

The pump doses in proportion to an external signal (i.e.: impulse launch counter), automatically calculating the relationship between incoming signals and pump strokes on the basis of the programmed ppm value.
The data to be entered is the ppm value, the impulse/litre ratio (or litre/impulse) of the counter and the concentration of the product to be dosed.
The dosage frequency can be modified during operation, by pressing the  keys at the same time to increase the flow, or the  keys to decrease it.



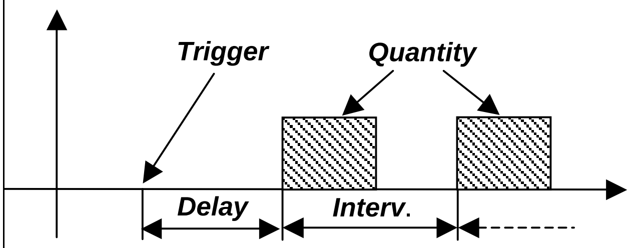
Paragraph 8 – Timed Dosage **(Frequency signal input "TRIGGER" activated)**

Programming

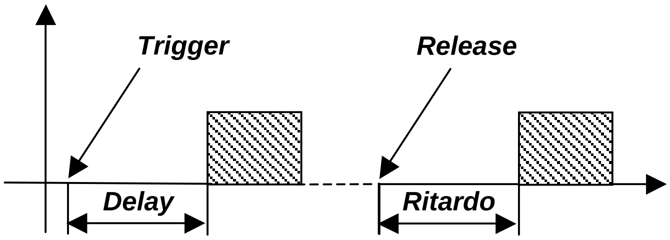


Operation

After receipt of the ***TRIGGER*** signal set, the pump doses a quantity that can be programmed in ml. It is possible to set a delay time before the dosing (***Delay***) and the interval between subsequent dosings (**Interv.**) as illustrated in the diagram:



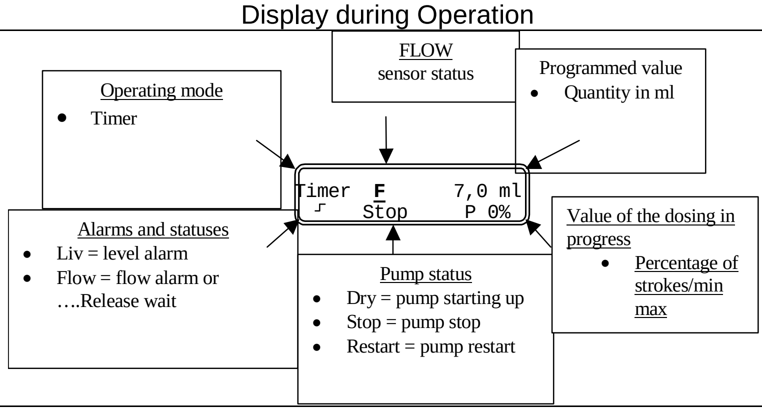
By setting for example an ***Interval****.* time = 0, a system is obtained in which the programmed quantity is dosed after each ***TRIGGER*** signal (with any delay that has been set):



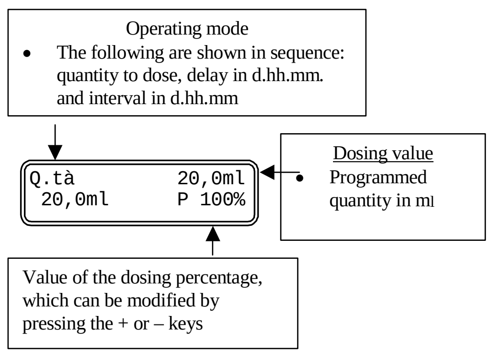
It is possible to start the dosing by pressing the + key, which, in practice, simulates the ***Trigger*** signal.
The ***Trigger*** signal can be set to ***N. Open*** (it is activated when the input passes from the open to the closed mode) or to ***N. Closed*** (it is activated when the input passes from the closed to the open mode).
The ***Trigger*** signal is locked during dosing (its receipt is neither stored nor managed).
The ***Pause*** (***Remote input***) input cannot be programmed and its activation stops the dosing, while its further deactivation makes the system wait again for the ***Trigger*** signal for a new dosing.

The dosage frequency can be modified while the pump is operating, by pressing the mode/enter and + keys at the same time to increase the frequency, or the mode/enter and – keys to decrease it.

Display during Operation

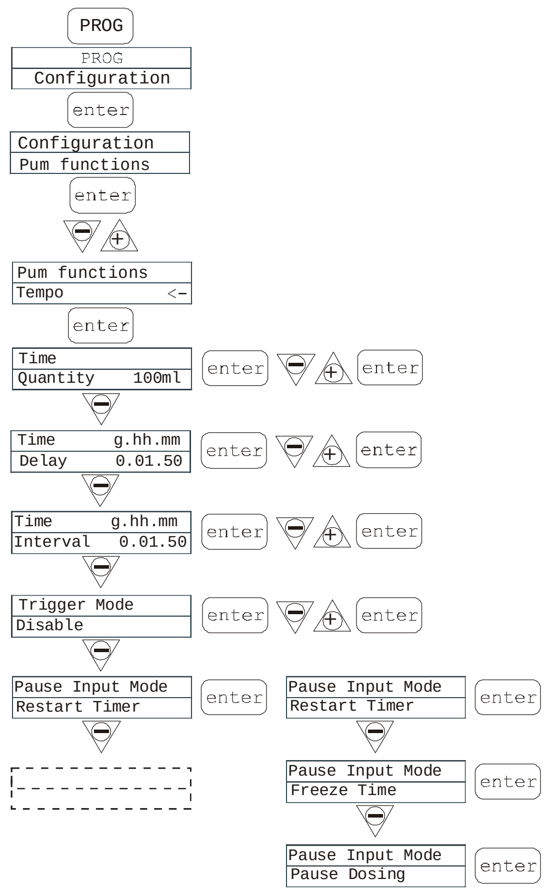


Display during Setting (MODE key)



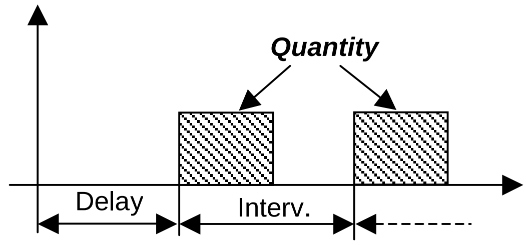
Paragraph 8 – Timed Dosage **(Frequency signal input “TRIGGER” not activated)**

Programming



Operation

The pump doses a programmed quantity in ml. It is possible to set a pump delay time (***Delay***) when the pump is started and an interval between two successive dosings (***Interval***), as illustrated in the diagram:



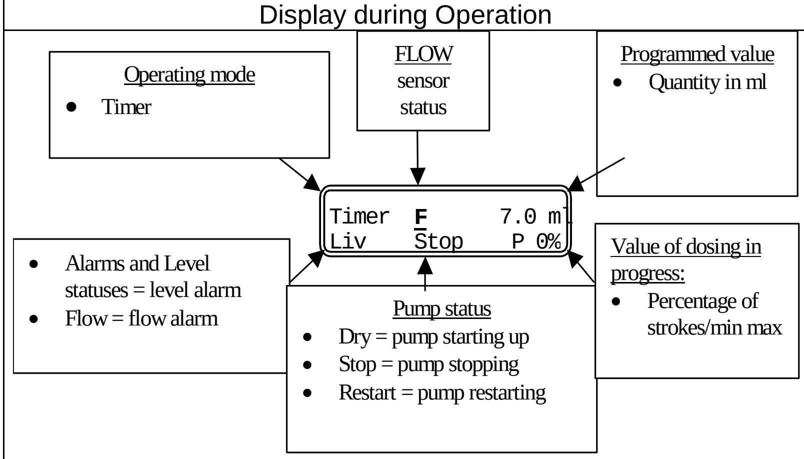
The ***Delay*** and ***Interval*** times are in dd.hh.mm (days, hours, minutes)

The ***Pause*** input can be programmed in three different modes:

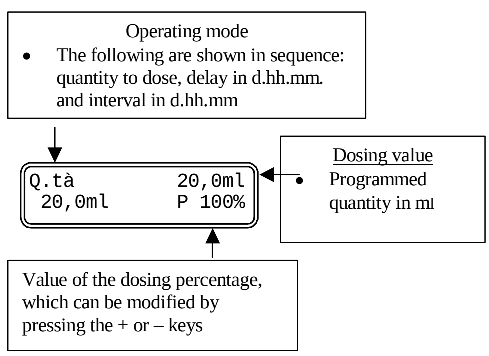
1. ***FreezeTime:*** when the pause is activated, the system cuts out the current time count and restarts it when the pause is deactivated.
2. ***Pause Dosing:*** with the pause activated, the system continues to count time the and stops the dosing.
3. ***Restart Timer***: when the pause is activated, the system stops the dosing and when the pause is deactivated the count starts again from the beginning.

The dosage frequency can be modified while the pump is operating, by pressing the mode enter ⊕ keys at the same time to increase the frequency, or the mode enter ⊖ keys to decrease it.

Display during Operation

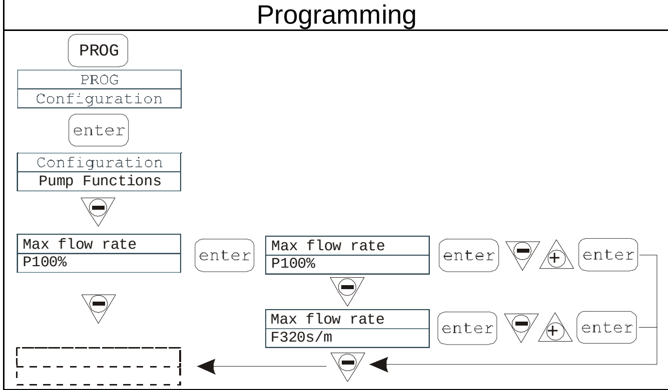


Display at start-up (MODE key)



Paragraph 9 – Setting the Maximum Flow

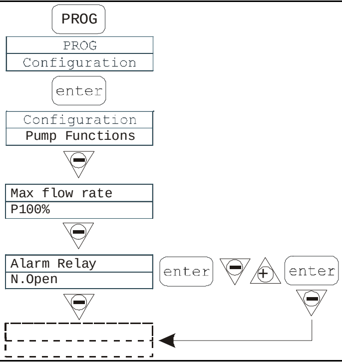
Programming



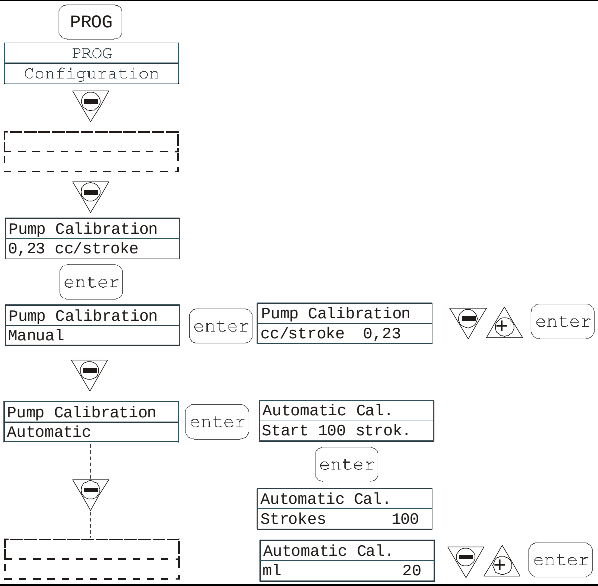
Operation

This makes it possible to set the maximum flow offered by the pump, and the programmed mode (% or frequency) is used as the standard unit of measurement when displaying the flow. Changes can be made by pressing the mode enter key, then using the ⊕ ⊖ keys to set the new value. Press mode enter to confirm and return to the main menu

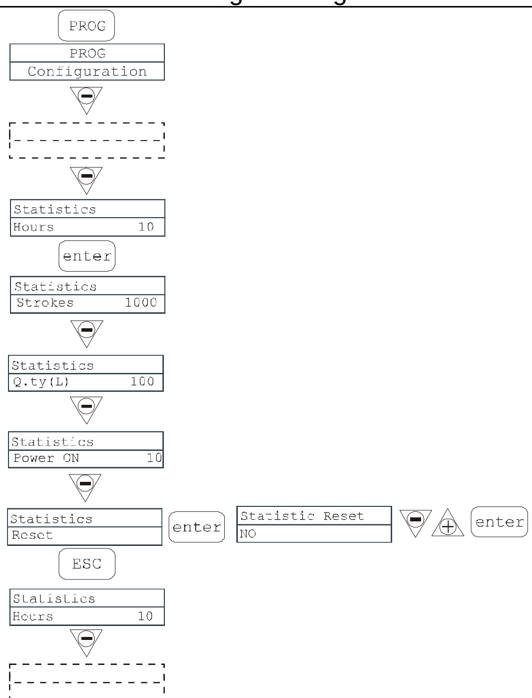
Paragraph 10 – Setting the Alarm Relay

Programming	Operation
	In the absence of an alarm situation, it can be set as open (default) or closed. Changes can be made by pressing the mode enter key, then using the ⊕ ⊖ keys to set the new value. Press mode enter to confirm and return to the main menu

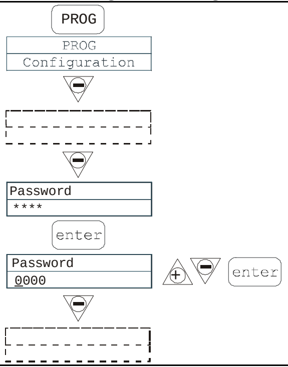
Paragraph 11 – Flow Calibration

Programming	Operation
	The memorized cc value per strike appears in the main menu. It can be calibrated in two different ways: MANUAL – manually enter the cc value per strike using the ⊕ ⊖ keys and confirm by pressing the mode enter key AUTOMATIC – the pump makes 100 strikes, which are started by pressing the mode enter key. At the end of this process, enter the quantity sucked up by the pump using the ⊕ ⊖ keys and confirm by pressing the mode enter key. The entered figure will be used in flow calculations.

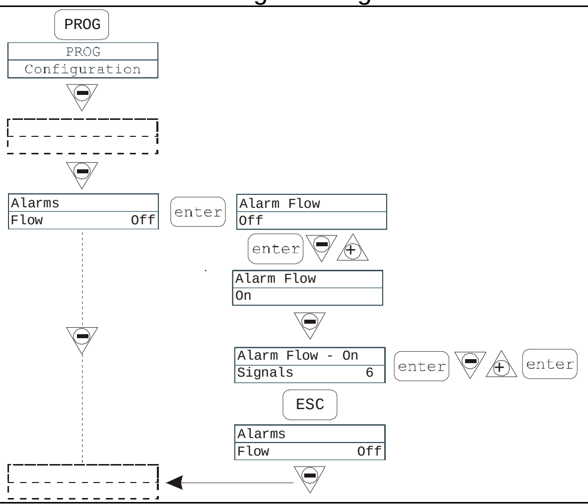
Paragraph 12 - Statistics

Programming	Operation
	The main menu displays the pump operation times. By pressing the mode enter key you can access other statistics: - Strokes = number of strokes made by the pump - Q.ty (L) = quantity dosed by the pump in litres; this figure is calculated on the basis of the memorised cc/stroke value - Power = number of pump starts - Reset = use the ⊕ ⊖ to reset the counters (YES) or otherwise (NO), then confirm by pressing the mode enter key. Pressing the esc key will take you back to the main menu.

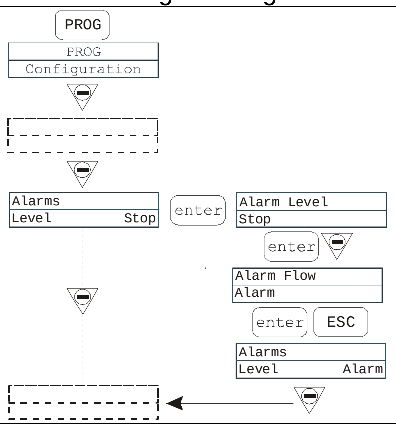
Paragraph 13 – Password

Programming	Operation
	By entering the password, you can enter the programming menu and see all the set values. The password will be requested whenever you seek to modify them. The flashing line indicates the number than can be modified. Use the ⊕ key to select the number (from 1 to 9), and the ⊖ key to select the number to be modified. Confirm by pressing the mode enter key. By setting “0000” (default), the password is eliminated.

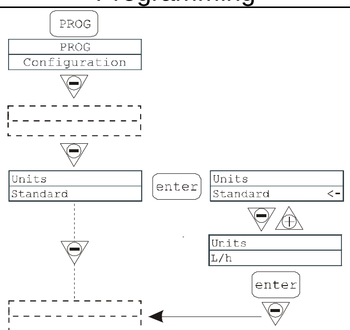
Paragraph 14 – Flow Alarm

Programming	Operation
	This makes it possible to activate (deactivate) the flow sensor. When activated (On), press the ⊖ key to access the request for the number of signals that the pump waits for before an alarm is triggered. The number flashes when you press the mode enter key, and you can then use the ⊕ ⊖ keys to set the value. Confirm by pressing the mode enter key. Press ESC to return to the main menu

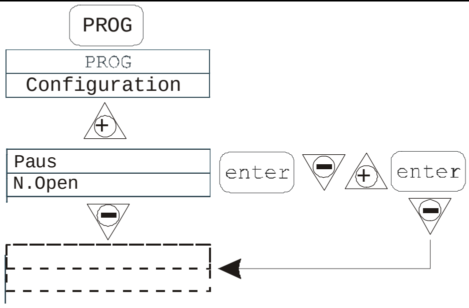
Paragraph 15 – Level Alarm

Programming	Operation
	This makes it possible to set the pump when the level sensor alarm is activated. In other words you can decide whether to stop dosage (Stop) or simply activate the alarm signal without stopping dosage. Changes can be made by pressing the mode enter key, then using the ⊕ ⊖ keys to set the alarm type. Confirm by pressing the mode enter key. Press ESC to return to the main menu

Paragraph 16 – Flow Display Unit

Programming	Operation
	This makes it possible to set the dosage unit of measurement on the display. Changes can be made by pressing the mode enter key, then using the ⊕ ⊖ keys to set the unit of measurement, choosing between L/h (liters/hour), Gph (Gallons/hour), ml/m (milliliters/minute) or standard (% or frequency, depending on settings). Press mode enter to confirm and return to the main menu

Paragraph 17 - Setting the Pause

Programming	Operation
	The pump can be paused by remote input. The factory setting is Normally Open. Changes can be made by pressing the mode enter key, then using the ⊕ ⊖ keys to set the new value (N. OPEN or N. CLOSED). Press mode enter to confirm and return to the main menu.

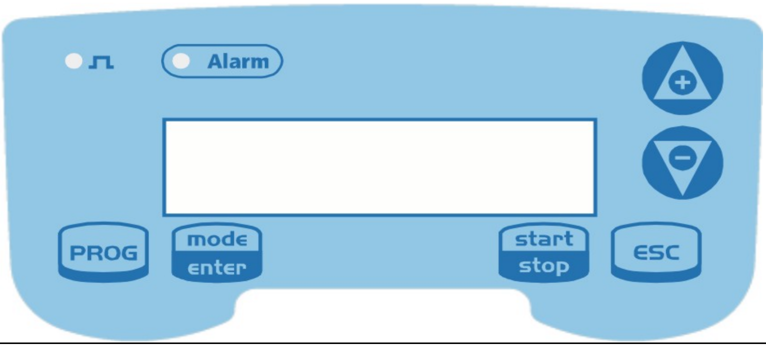
Display contrast adjustment.

For adjusting the display contrast keep the key esc pressed and within 5 seconds press the keys ⊕ or ⊖ to increase or decrease the contrast.

Alarms

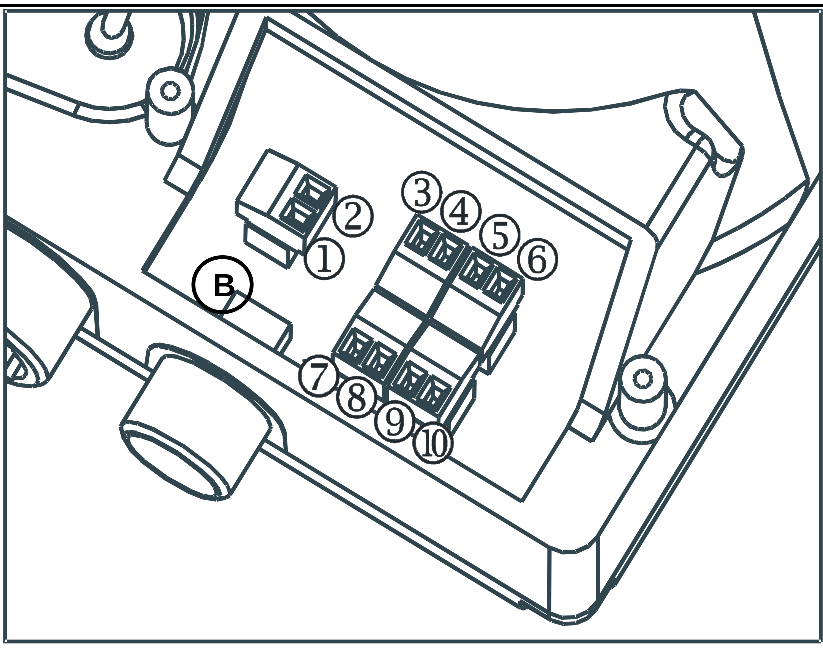
Display	**Cause**	**Interruption**
Fixed alarm LED Flashing word “Lev” I.e. `Man` `Lev P100%`	End of level alarm, without interrupting pump operation	Restore the liquid level.
Fixed alarm LED Flashing words “Lev” and “stop” I.e. `Man` `Lev Stop P100%`	End of level alarm, with interruption to pump operation	Restore the liquid level.
Flashing word “Mem” I.e. `1:n 6` `Mem`	The pump receives one or more pulses during dosage with memory function on Off	Press the start stop key
Flashing word “Mem” I.e. `1:n M 6` `Mem`	The pump receives one or more pulses during dosage with memory function on On	When the pump finishes receiving external impulses, it returns the memorized strokes
Fixed alarm LED Flashing word “Flw” I.e. `Man F` `Flw P100%`	Active flow alarm. The pump has not received the programmed number of signals from the flow sensor.	Press the start stop key
I.e. `Parameter Error` `PROG to default`	Internal CPU communication error.	Press the PROG key to restore the default parameters.

Steuertafel – TEKNA TPG



	Zugriff auf das Programmiermenü
	Während des Pumpenbetriebs: Durch Drücken werden die programmierten Werte zyklisch auf dem Display angezeigt; bei gleichzeitigem Drücken der Tasten   wird ein Wert, je nach ausgewähltem Betriebsmodus, erhöht bzw. verringert. Während der Programmierung übernimmt diese Taste die Funktion “Enter”, d.h. dass der Zugriff auf die verschiedenen Menüstufen und die dort vorgenommenen Veränderungen bestätigt werden.
	Startet und stoppt die Pumpe. Wenn ein Füllstandsalarm (nur Alarmfunktion), ein Durchflussalarm und ein Memoryalarm aktiv ist, deaktiviert diese Taste die Anzeige auf dem Display.
	Zum “Verlassen” der verschiedenen Menüstufen. Vor dem endgültigen Verlassen der Programmierung öffnet sich ein Speicherungsdialog für Veränderungen.
	Blättert nach oben im Menü, oder erhöht die numerischen Werte, die verändert werden sollen. Im Batch-Modus kann diese Taste die Dosierung starten.
	Blättert nach unten im Menü, oder verringert die numerischen Werte, die verändert werden sollen.
	Grüne Led, die während dem Dosiervorgang blinkt.
	Rote Led, die sich bei den verschiedenen Alarmsituationen einschaltet.

Anschlusse Elektrik



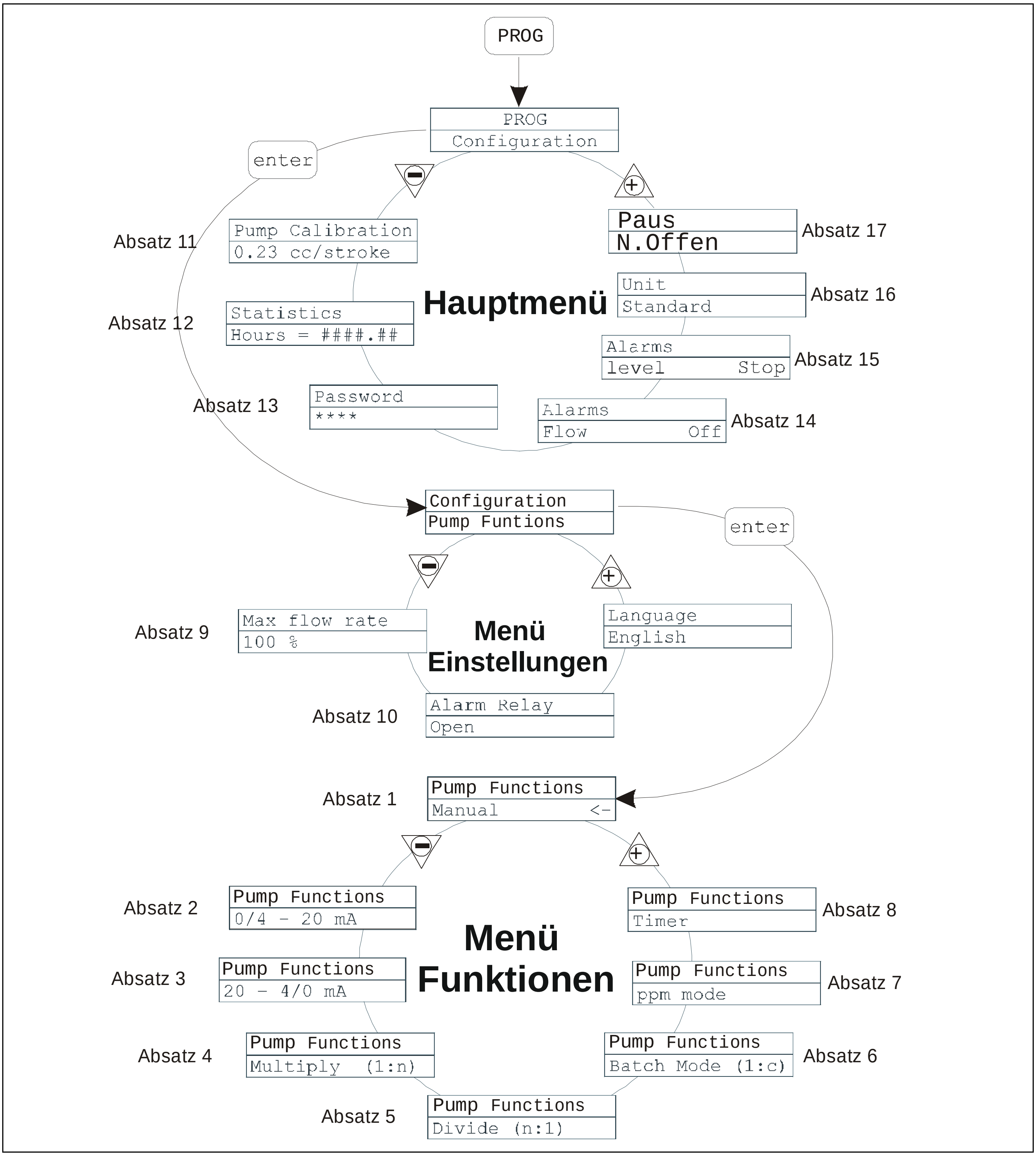
Nr.	Beschreibung	
1	Relaisausgang (Alarm) Wahlweise Öffner (NC) oder Schliesser (NO)	
2		
3	Pole +	4-20 mA Eingangs-Signal Eingang Widerstand: 200 ohm
4	Pole -	
5	-Eingang Fernbedienung(Start-Stop) -Eingang Pause-signal	
6		
7	-Impuls – Eingang (Impuls – Wasserzähler) -Eingang externes Trigger-signal	
8		
9	Eingang Fluss - Sensor	
10		
B	Eingang Füllstandkontrolle	

Durch über drei Sekunden langes Drücken der Taste PROG erhalten Sie Zugriff auf die Programmierung. Über die Tasten ⊕ ⊖ können Sie die Menüpunkte durchblättern. Über die Taste mode enter erhalten Sie Zugriff auf die Veränderungen.

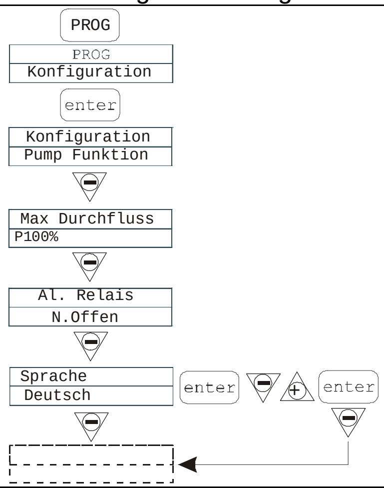
Werkseitig ist die Pumpe auf den Konstant-Modus programmiert. Die Pumpe kehrt nach 1 Minute Inaktivität automatisch zum Betriebs-Modus zurück. In diesem Fall werden etwaig eingegebene Daten nicht gespeichert.

Über die Taste ESC verlassen Sie die Programmierstufen. Bei Verlassen der Programmierung wird auf dem Display folgendes angezeigt:

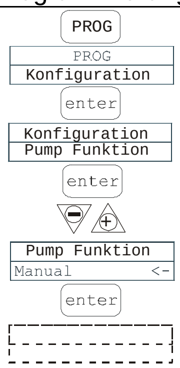
Exit		Exit	
No Save	∇ ∆	Save	mode enter Zur Bestätigung der Auswahl

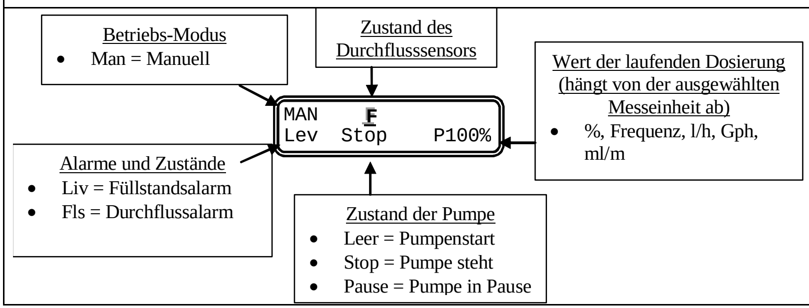
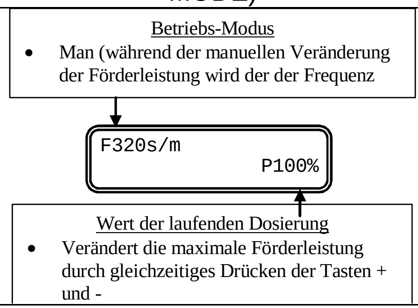


Sprachauswahl

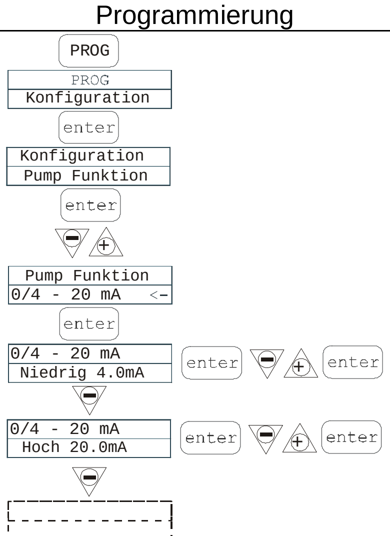
Programmierung	Funktionsweise
	Ermöglicht die Sprachauswahl. Werkseitig ist die Sprache Englisch eingestellt. Durch Drücken von erhalten Sie Zugriff auf die Veränderung. Stellen Sie dann über die Tasten den Wert ein. Über bestätigen Sie und werden zum Hauptmenü zurückgeleitet.

Absatz 1 – Manuelle Dosierung

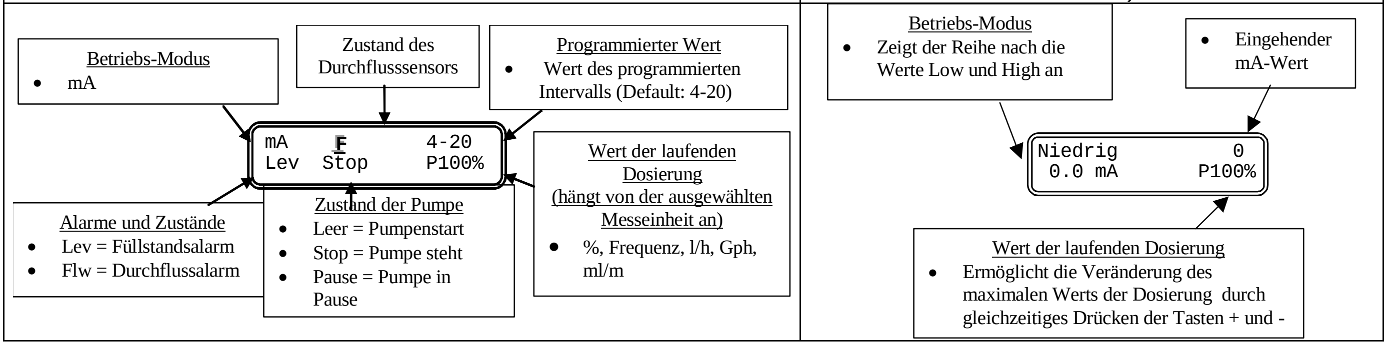
Programmierung	Funktionsweise
	Die Pumpe arbeitet im Konstant-Modus. Die Förderleistung wird manuell geregelt. Durch gleichzeitiges Drücken der Tasten wird die Förderleistung erhöht bzw. über die Tasten verringert.

Anzeige während des Betriebs	Anzeige während der Einstellung (Taste MODE)
	

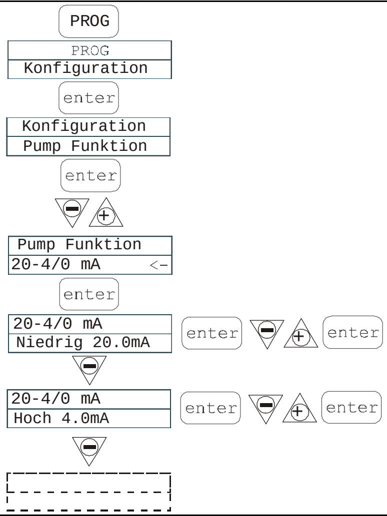
Absatz 2 – Proportionale Dosierung 0/4-20 mA

Programmierung	Funktionsweise
	Die Pumpe dosiert proportional zu einem Signal zwischen (0)4 und 20 mA. Werkseitig ist die Pumpe so eingestellt, dass sie die Dosierung bei 4 mA unterbricht und mit der eingestellten Höchstfrequenz dosiert, wenn sie 20 mA empfängt. Während der Programmierung können diese beiden Werte verändert werden. Die Höchstfrequenz kann während des Betriebs verändert werden. Durch gleichzeitiges Drücken der Tasten wird die Förderleistung erhöht bzw. über die Tasten verringert.

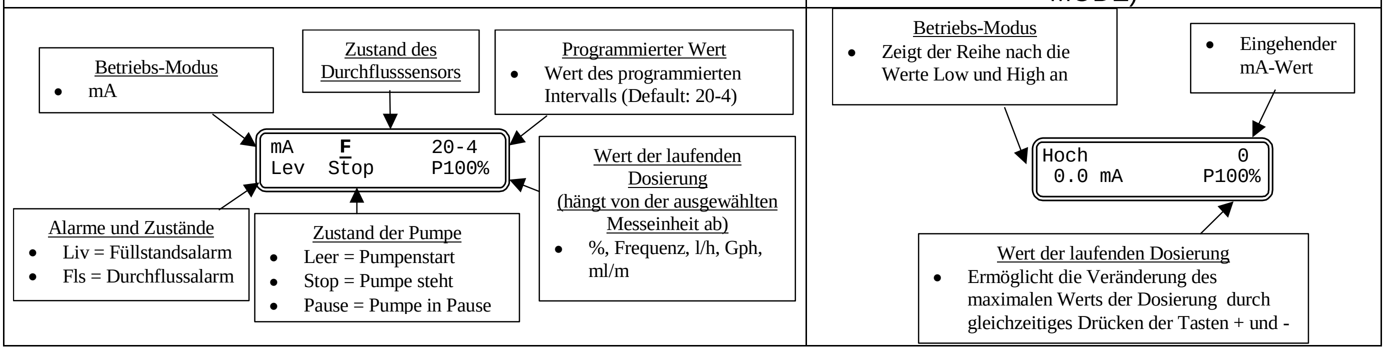
Anzeige während des Betriebs	Anzeige während der Einstellung (Taste MODE)



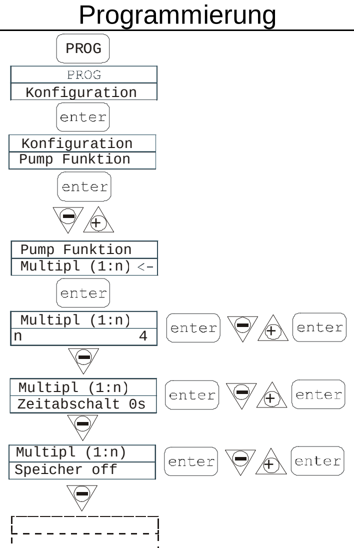
Absatz 3 – Proportionale Dosierung 20-4/0 mA

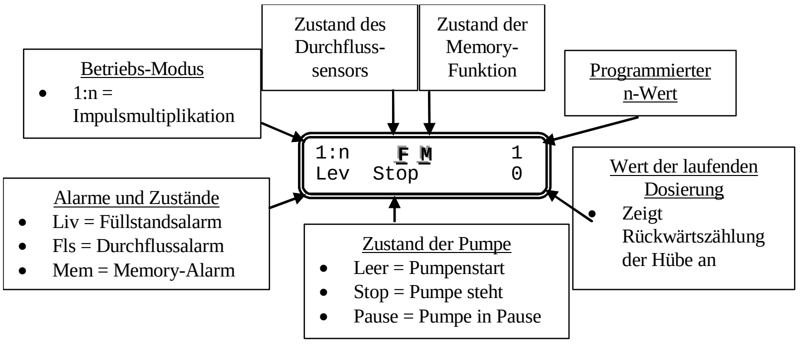
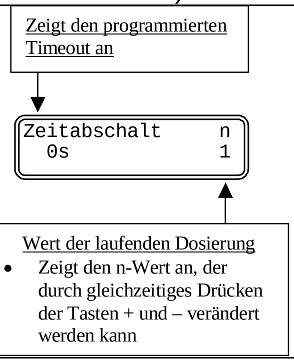
Programmierung	Funktionsweise
	Die Pumpe dosiert proportional zu einem Signal zwischen 20 und 4(0) mA. Werkseitig ist die Pumpe so eingestellt, dass sie die Dosierung bei 20 mA unterbricht und mit der eingestellten Höchstfrequenz dosiert, wenn sie 4 mA empfängt. Während der Programmierung können diese beiden Werte verändert werden. Die Höchstfrequenz kann während des Betriebs verändert werden. Durch gleichzeitiges Drücken der Tasten wird die Förderleistung erhöht bzw. über die Tasten verringert.

Anzeige während des Betriebs	Anzeige während der Einstellung (Taste MODE)

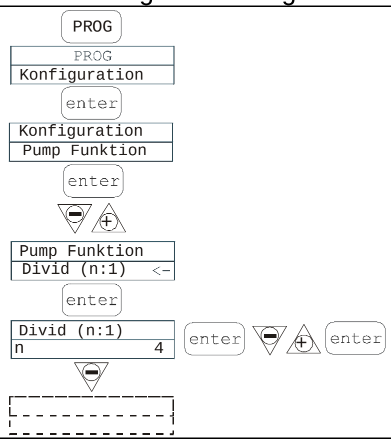


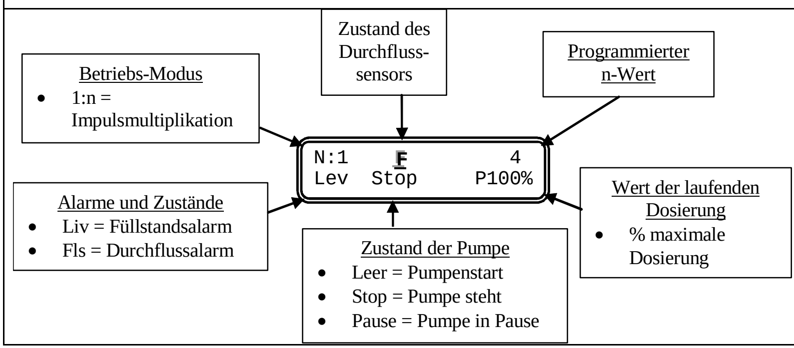
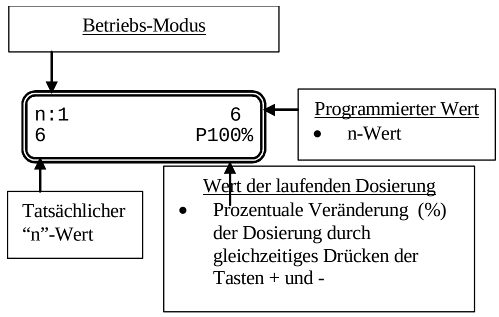
Absatz 4 – Proportionale Dosierung mit externen Impulsen (Multiplikation)

Programmierung	Funktionsweise
	Die Pumpe dosiert proportional zu einem externen Signal (z.B.: Wasseruhr mit Impulsgeber). Bei jedem empfangenen Signal führt die Pumpe die programmierten “n“ Hübe aus. Die Pumpe stellt automatisch die Dosierfrequenz ein und passt diese an den Zeitraum an, der zwischen zwei aufeinander folgenden Signalen liegt. Es ist möglich, diesen Zeitraum (Timeout), über den hinaus die Pumpe die Zeitzählung wieder von Null beginnt, in Sekunden zu programmieren, um zu lange Dosierungen zu vermeiden. Die Pumpe verfügt über eine Memory-Funktion, die den Empfang eines Signals während der Dosierung signalisiert. Wenn sie auf OFF gestellt ist, beschränkt sie sich darauf, zu signalisieren. Wenn sie auf ON gestellt ist, signalisiert und speichert sie die Impulse und führt diese aus, wenn sie keine Signale mehr empfängt. Der Wert “n“ kann während des Betriebs verändert werden. Durch gleichzeitiges Drücken der Tasten wird die Förderleistung erhöht bzw. über die Tasten verringert.

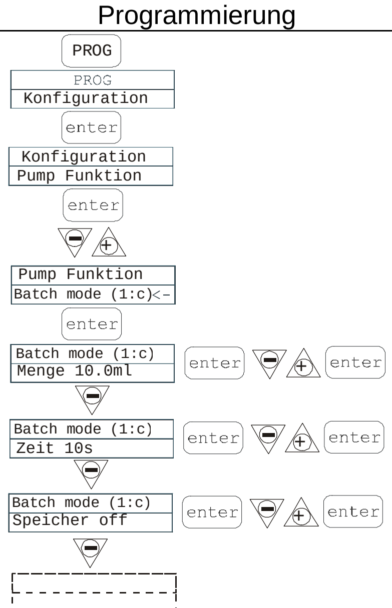
Anzeige während des Betriebs	Anzeige während der Einstellung (Taste MODE)
	

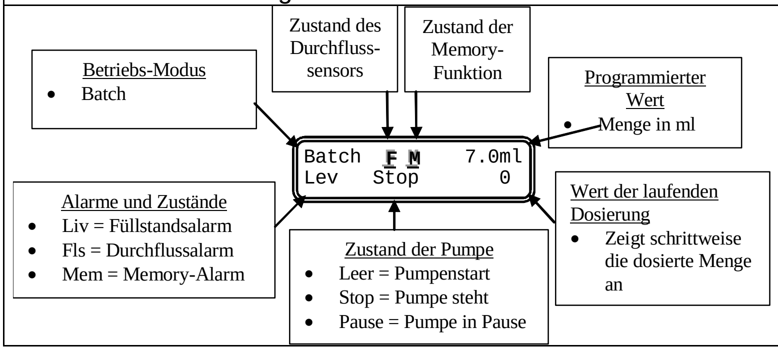
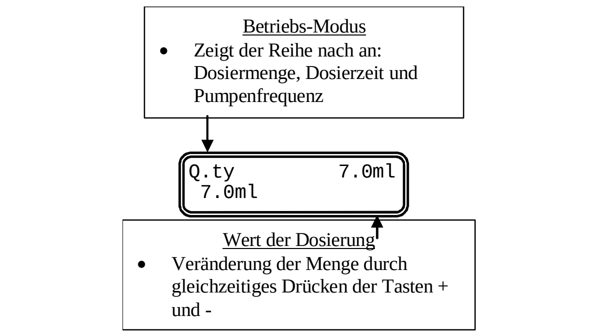
Absatz 5 – Proportionale Dosierung mit externen Impulsen (Division)

Programmierung	Funktionsweise
	Die Pumpe dosiert proportional zu einem externen Signal (z.B.: Wasseruhr mit Impulsgeber). Alle "n" empfangenen Signale führt die Pumpe einen Hub aus. Geben Sie während der Programmierung den Wert "n" ein. Durch Programmieren des Werts "n" wird der maximale prozentuale Anteil (%) der Dosierung eingestellt. Dieser Wert kann während des Betriebs verändert werden. Durch gleichzeitiges Drücken der Tasten [mode/enter] [+] wird er erhöht bzw. über die Tasten [mode/enter] [–] verringert.

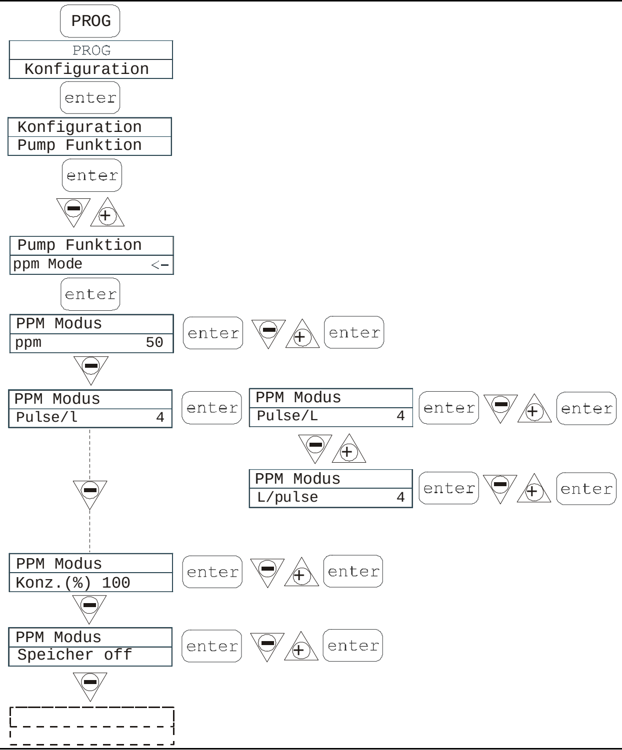
Anzeige während des Betriebs	Anzeige während der Einstellung (Taste MODE)
	

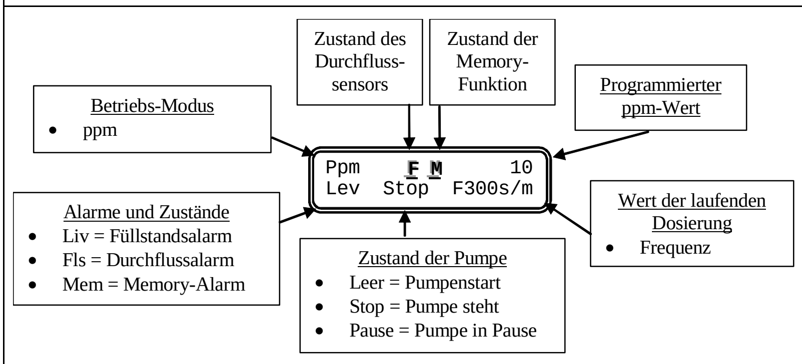
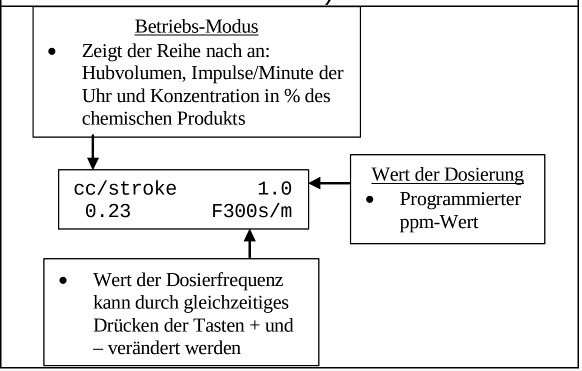
Absatz 6 – Proportionale Dosierung mit externen Impulsen (Batch-Dosierung)

Programmierung	Funktionsweise
	Die Pumpe dosiert proportional zu einem externen Signal (z.B.: Wasseruhr mit Impulsgeber). In diesem Fall kann die Menge, die dosiert werden soll, in ml und die Zeit, in der die Dosierung durchgeführt werden soll, programmiert werden. Die Dosierung kann durch Drücken der Taste [+] oder über eine Fernsteuerung manuell gestartet werden. Die Taste [start/stop] unterbricht die Dosierung. Diese kann daraufhin durch Drücken der Taste [+] auf Null gestellt oder durch erneutes Drücken von [start/stop] wieder gestartet werden. Die Dosiermenge kann während des Betriebs verändert werden. Durch gleichzeitiges Drücken der Tasten [mode/enter] [+] wird die Förderleistung erhöht bzw. über die Tasten [mode/enter] [–] verringert.

Anzeige während des Betriebs	Anzeige während der Einstellung (Taste MODE)
	

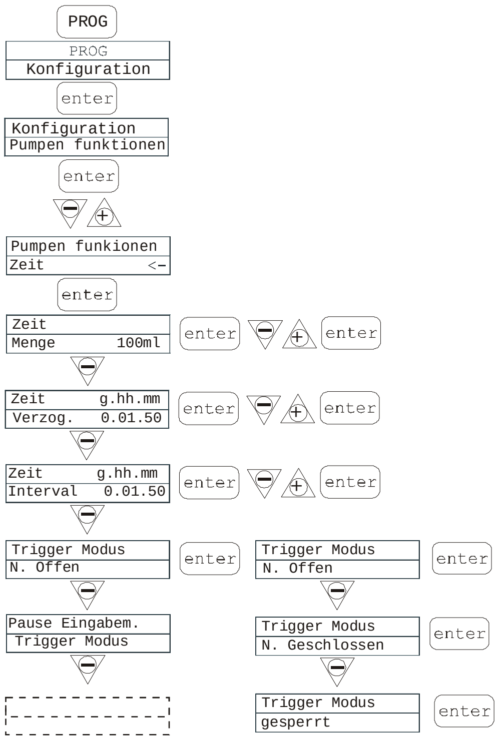
Absatz 7 – Proportionale Dosierung mit externen Impulsen (PPM-Dosierung)

Programmierung	Funktionsweise
	Die Pumpe dosiert proportional zu einem externen Signal (z.B.: Wasseruhr mit Impulsgeber), wobei automatisch das Verhältnis zwischen den Eingangssignalen und den Pumpenhüben entsprechend des programmierten ppm-Werts berechnet wird. Die einzugebenden Daten sind der ppm-Wert, das Verhältnis Impulse/Liter (bzw. Liter/Impulse) der Wasseruhr und die Konzentration des Produkts, das dosiert werden soll. Während des Betriebs kann die Dosierfrequenz verändert werden. Durch gleichzeitiges Drücken der Tasten mode enter ⊕ wird sie erhöht bzw. über die Tasten mode enter ⊖ verringert.

Anzeige während des Betriebs	Anzeige während der Einstellung (Taste MODE)
	

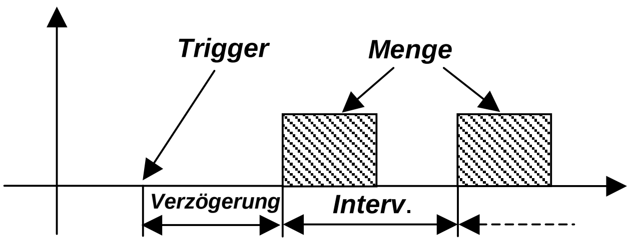
Programmazione	Funzionamento

Programmazione

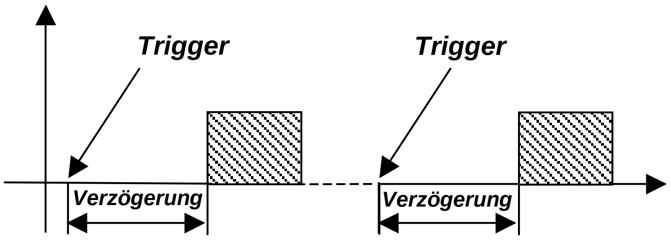


Funzionamento

Nach Empfang des eingestellten ***TRIGGER***-Signals dosiert die Pumpe eine in ml programmierbare Menge. Es kann eine Verzögerungszeit vor der Dosierung (***Verzögerung***) und der Zeitabstand zwischen aufeinander folgenden Dosierungen (***Pause***) eingestellt werden, wie im Schema gezeigt:



Wird zum Beispiel eine Zeit ***Pause*** = 0 eingegeben, erhält man ein System, bei dem die programmierte Menge nach jedem ***TRIGGER*** -Signal dosiert wird (mit der etwaig eingestellten Verzögerung):

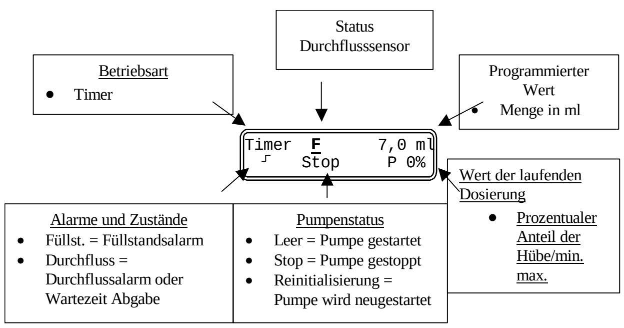


Es ist auch möglich, die Dosierung durch Drücken der Taste + zu starten, die praktisch das ***Trigger***-Signal nachahmt.
Das ***Trigger***-Signal kann auf ***N.Offen*** eingestellt werden (es aktiviert sich, wenn der Eingang von der Betriebsart geöffnet zur Betriebsart geschlossen übergeht), oder auf ***N. Geschlossen*** (es aktiviert sich, wenn der Eingang von der Betriebsart geschlossen zur Betriebsart geöffnet übergeht).
Das ***Trigger***-Signal ist während der Dosierung blockiert (sein Empfang wird weder gespeichert, noch verwaltet).
Der Eingang ***Pause*** (***Eingang Fernbedienung***) kann nicht programmiert werden und seine Aktivierung blockiert die Dosierung, während die nachfolgende Deaktivierung das System wieder in den Zustand Warten auf das ***Trigger***-Signal für eine neue Dosierung versetzt.

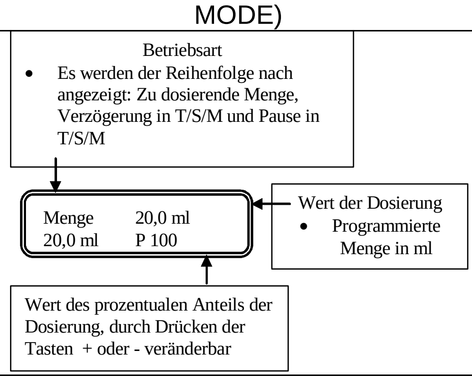
Während des Pumpenbetriebs kann die Dosierfrequenz verändert werden, indem gleichzeitig die Tasten [mode enter] [+] gedrückt werden, um die Frequenz zu erhöhen bzw. die Tasten [mode enter] [−], um sie zu verringern.

Anzeige während des Betriebs	Anzeige während der Einstellung (Taste MODE)

Anzeige während des Betriebs

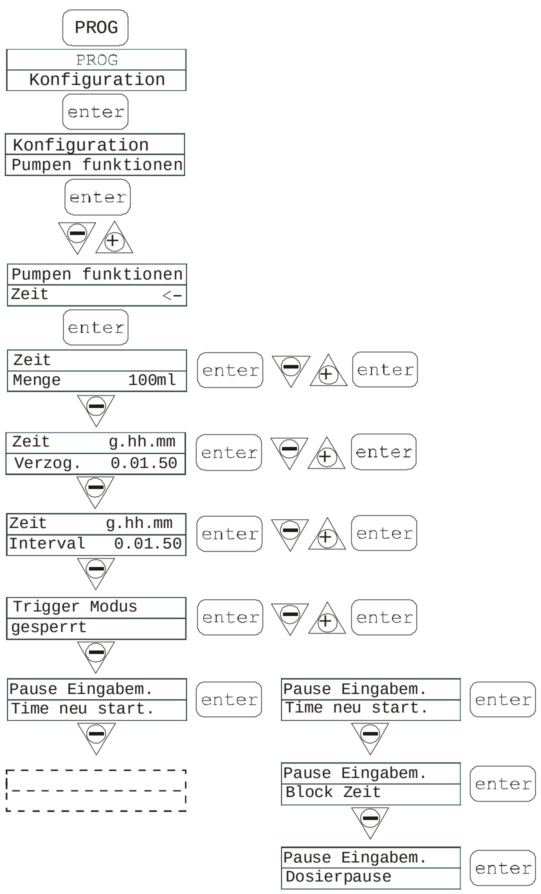


Anzeige während der Einstellung (Taste MODE)



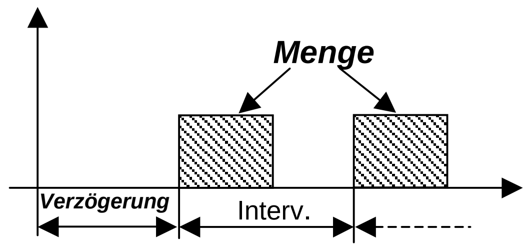
Absatz 8 – Getaktete Dosierung **(Eingang Frequenzsignal "TRIGGER" nicht aktiviert)**

Programmazione



Funzionamento

Die Pumpe dosiert eine in ml programmierbare Menge. Es kann eine Startverzögerung der Pumpe (***Verzögerung***) und der Zeitabstand zwischen zwei aufeinander folgenden Dosierungen (***Pause***) eingestellt werden, wie im Schema gezeigt:



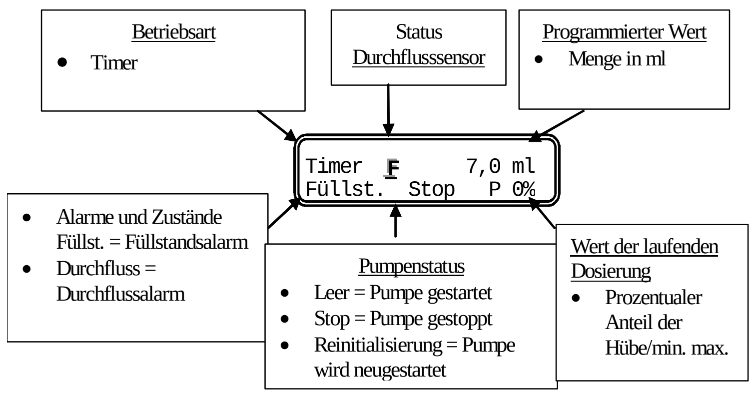
Die ***Verzögerungs***- und ***Pausenzeiten*** sind in T/S/M (Tage, Stunden, Minuten) angegeben.

Der ***Pausen***-Eingang kann auf drei unterschiedliche Arten programmiert werden:

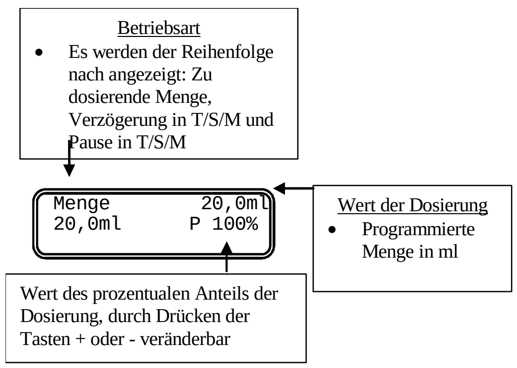
1. ***Blocki Zeit:*** Bei aktivierter Pause blockiert das System die Zählung der aktuellen Zeit und nimmt sie wieder auf, wenn die Pause deaktiviert wird.
2. ***Dosierpause:*** Bei aktivierter Pause zählt das System die Zeit weiter und blockiert die Dosierung.
3. ***Time neu start.:*** Bei aktivierter Pause blockiert das System die Dosierung und startet die Zählung neu, wenn die Pause deaktiviert wird.

Während des Pumpenbetriebs kann die Dosierfrequenz verändert werden, indem gleichzeitig die Tasten mode enter ⊕ gedrückt werden, um die Frequenz zu erhöhen bzw. die Tasten mode enter ⊖, um sie zu verringern.

Anzeige während des Betriebs

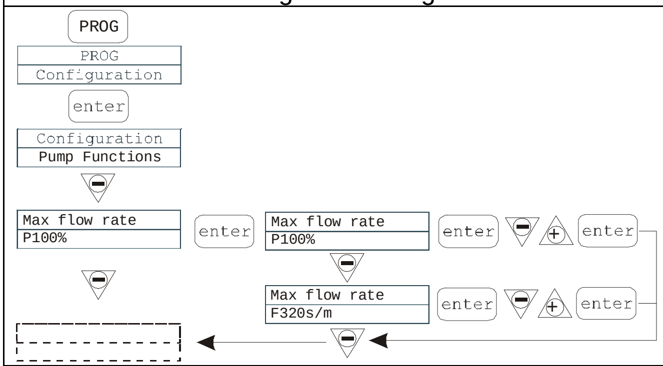


Anzeige während der Einstellung (Taste MODE)



Absatz 9 – Einstellung der maximalen Förderleistung

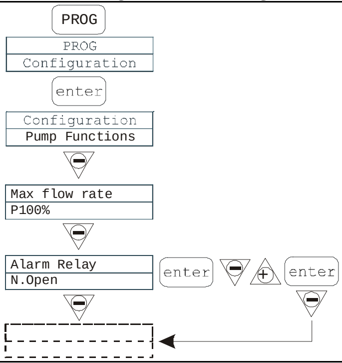
Programmierung



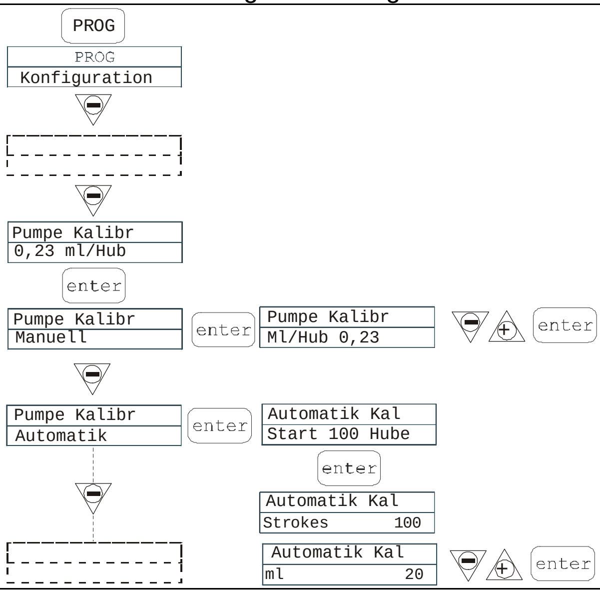
Funktionsweise

Ermöglicht die Einstellung der maximalen Förderleistung, die die Pumpe erreichen kann, und der programmierte Betriebs-Modus (% oder Frequenz) wird zur Anzeige der Förderleistung in der Standardmesseinheit. Durch Drücken von mode enter erhalten Sie Zugriff auf die Veränderung. Stellen Sie dann über die Tasten ⊕ ⊖ den Wert ein. Über mode enter bestätigen Sie und werden zum Hauptmenü zurückgeleitet.

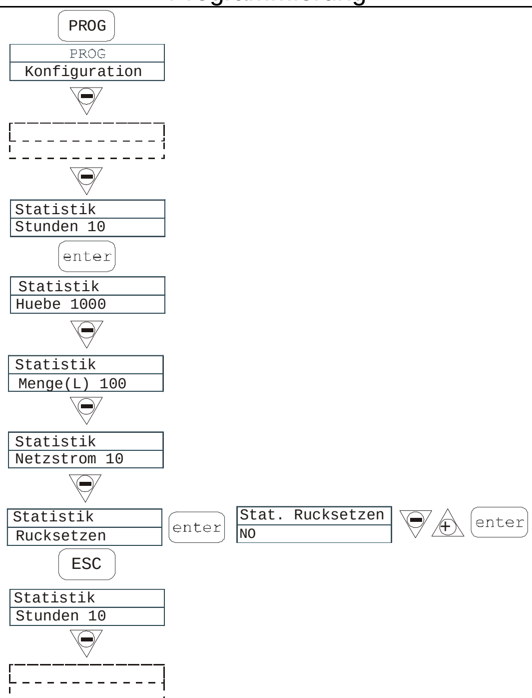
Absatz 10 – Einstellung Alarmrelais

Programmierung	Funktionsweise
	Wenn keine Alarmsituation vorliegt, kann es auf geöffnet (werkseitige Einstellung) oder geschlossen gestellt werden. Durch Drücken von erhalten Sie Zugriff auf die Veränderung. Stellen Sie dann über die Tasten den Wert ein. Über bestätigen Sie und werden zum Hauptmenü zurückgeleitet.

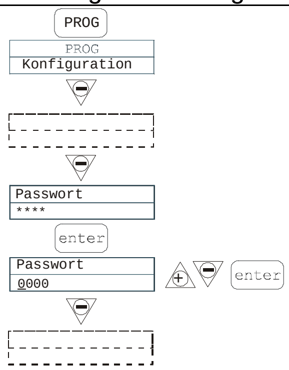
Absatz 11 – Kalibrierung der Förderleistung

Programmierung	Funktionsweise
	Im Hauptmenü erscheint das gespeicherte Hubvolumen. Es kann auf zwei Arten kalibriert werden: MANUELL – Geben Sie über die Tasten manuell das Hubvolumen ein und bestätigen Sie über AUTOMATISCH – Die Pumpe führt 100 Hübe aus, die über die Taste gestartet und über bestätigt werden. Wenn diese Hübe ausgeführt worden sind, geben Sie über die Tasten die von der Pumpe angesaugte Menge ein und bestätigen Sie über . Der eingegebene Wert wird bei der Berechnung der Förderleistungen verwendet.

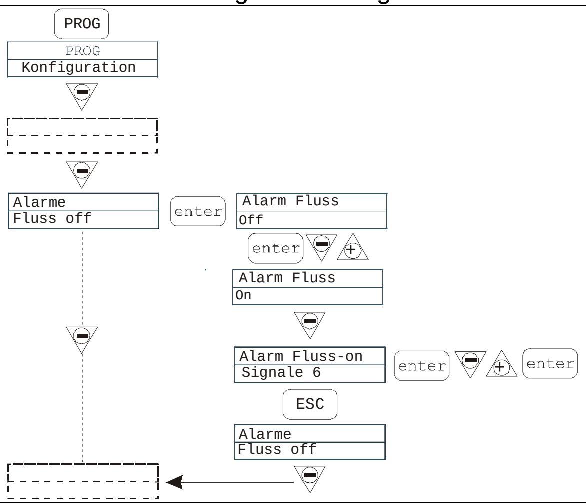
Absatz 12 – Statistiken

Programmierung	Funktionsweise
	Im Hauptmenü werden die Betriebsstunden der Pumpe angezeigt. Durch Drücken der Taste erhalten Sie Zugriff auf die anderen Statistiken: - Strokes = Anzahl der von der Pumpe ausgeführten Hübe - Q.ty(L) = in Litern ausgedrückte von der Pumpe dosierte Menge; dieser Wert wird entsprechend des gespeicherten Hubvolumens berechnet. - Power = Anzahl der Pumpenstarts - Reset = über die Tasten können Sie wählen, ob Sie die Uhr auf Null stellen möchten (YES) oder nicht (NO), über bestätigen Sie. Durch Drücken von gelangen Sie zum Hauptmenü zurück.

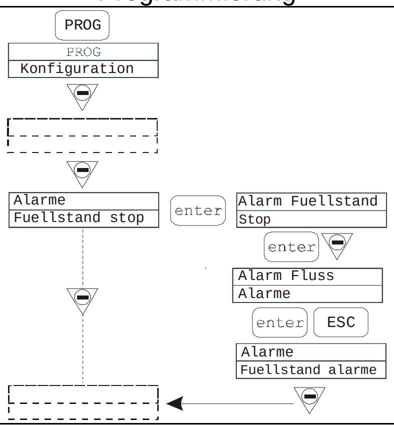
Absatz 13 – Passwort

Programmierung	Funktionsweise
	Durch Eingabe des Passworts erhalten Sie Zugriff auf die Programmierung und können sich alle eingegebenen Werte ansehen. Jedes Mal wenn Sie versuchen, diese Werte zu verändern, erscheint ein eigener Passwortdialog. Die blinkende Linie zeigt die veränderbare Nummer an. Wählen Sie über die Taste die Nummer aus (zwischen 1 und 9), wählen Sie über die Taste die Nummer aus, die verändert werden soll, und bestätigen Sie anschließend über mode enter. Durch Eingabe von “0000” (werkseitige Einstellung) wird die Passwortabfrage übersprungen.

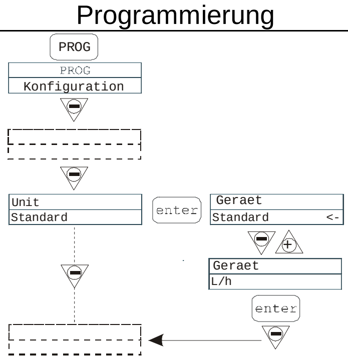
Absatz 14 – Durchflussalarm

Programmierung	Funktionsweise
	Ermöglicht die Aktivierung (Deaktivierung) des Durchflusssensors. Wenn er einmal aktiviert ist (ON), erhalten Sie durch Drücken der Taste Zugriff auf den Abfragedialog, wie viele Signale die Pumpe abwartet, bevor Sie einen Alarm auslöst. Durch Drücken von mode enter beginnt die Nummer zu blinken. Stellen Sie dann über die Tasten den Wert ein. Über mode enter bestätigen Sie. Durch Drücken von ESC werden Sie zum Hauptmenü zurückgeleitet.

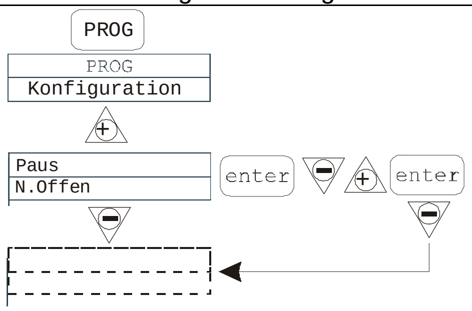
Absatz 15 – Füllstandsalarm

Programmierung	Funktionsweise
	Ermöglicht die Einstellung des Zeitpunkts, an dem der Füllstandsalarm aktiviert wird, also auch ob die Dosierung blockiert (Stop), oder einfach nur das Alarmsignal aktiviert werden soll, ohne dabei die Dosierung zu blockieren. Durch Drücken von mode enter erhalten Sie Zugriff auf die Veränderung. Stellen Sie dann über die Tasten die Alarmart ein. Über mode enter bestätigen Sie. Durch Drücken von ESC werden Sie zum Hauptmenü zurückgeleitet.

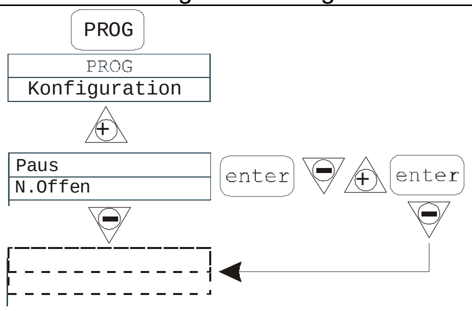
Absatz 16 – Anzeigeeinheit der Förderleistung

Programmierung	Funktionsweise
	Ermöglicht die Einstellung der Maßeinheit der Dosierung über eine Anzeige auf dem Display. Durch Drücken von mode enter erhalten Sie Zugriff auf die Veränderung. Stellen Sie dann über die Tasten die gewünschte Maßeinheit ein, L/H (Liter/Stunde), GpH (Gallone/Stunde), ml/m (Milliliter/Minute) oder die Standardeinstellung (% oder Frequenz, je nach Einstellung). Über mode enter bestätigen Sie und werden zum Hauptmenü zurückgeleitet.

Absatz 16 - Einstellung Pause

Programmierung	Funktionsweise
	Steuereingang: Pumpe Stop / Start. Werkseinstellung: Bei Schließerkontakt (elektrisch leitende Verbindung zwischen beiden Anschlussklemmen) Pumpenstop. Durch Drücken von mode/enter erhalten Sie Zugriff auf die Veränderung. Stellen Sie dann über die Tasten ⊕ ⊖ den Wert ein (N. OFFEN oder N. GESCHLOSSEN). Über mode/enter bestätigen Sie und werden zum Hauptmenü zurückgeleitet.

Absatz 17 - Einstellung Pause

Programmierung	Funktionsweise
	Steuereingang: Pumpe Stop / Start. Werkseinstellung: Bei Schließerkontakt (elektrisch leitende Verbindung zwischen beiden Anschlussklemmen) Pumpenstop. Durch Drücken von mode/enter erhalten Sie Zugriff auf die Veränderung. Stellen Sie dann über die Tasten ⊕ ⊖ den Wert ein (N. OFFEN oder N. GESCHLOSSEN). Über mode/enter bestätigen Sie und werden zum Hauptmenü zurückgeleitet.

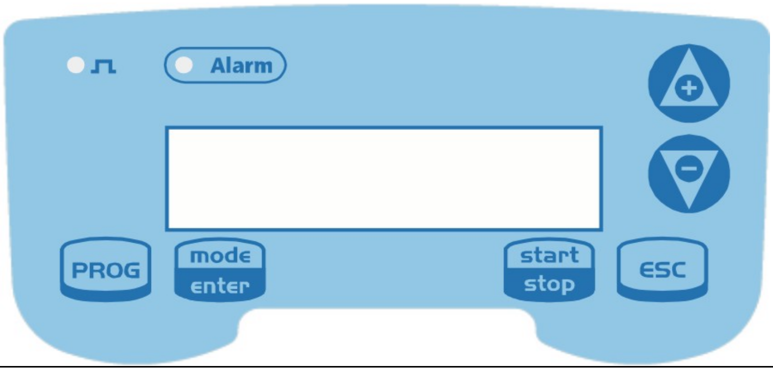
Display - Einstellung Kontrast

Für die Einstellung des Display-Kontrasts wird die ESC Taste festgedrückt und innerhalb von 5 Sekunden mit den Tasten ⊕ oder ⊖ der gewünschte Kontrast festgelegt

Alarme

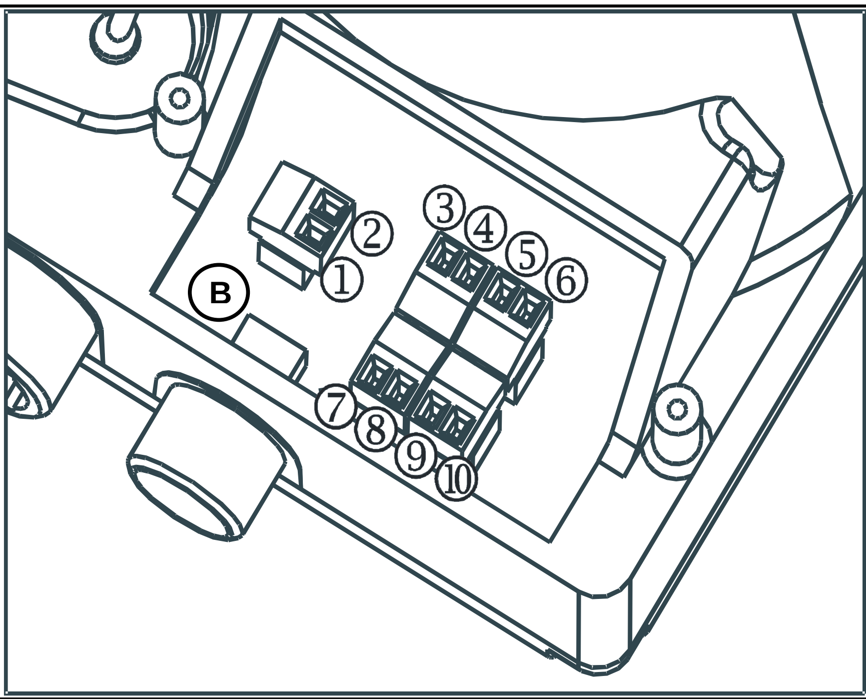
Anzeige	Ursache	Unterbrechung
Alarm-Led leuchtet kontinuierlich Der Schriftzug Lev blinkt Bsp. `Man` `Lev P100%`	Alarm Füllstand nicht ausreichend, ohne Unterbrechung des Pumpenbetriebs	Flüssigkeit nachfüllen
Alarm-Led leuchtet kontinuierlich Der Schriftzug Lev und Stop blinkt Bsp. `Man` `Lev Stop P100%`	Alarm Füllstand nicht ausreichend, mit Unterbrechung des Pumpenbetriebs	Flüssigkeit nachfüllen
Der Schriftzug Mem blinkt Bsp. `1:n 6` `Mem`	Die Pumpe empfängt einen oder mehrere Impulse während der Dosierung mit Memory-Funktion in Off-Stellung	Die Taste start/stop drücken
Der Schriftzug Mem blinkt Bsp. `1:n M 6` `Mem`	Die Pumpe empfängt einen oder mehrere Impulse während der Dosierung mit Memory-Funktion in On-Stellung	Wenn die Pumpe keine externen Impulse mehr empfängt, führt sie die gespeicherten Hübe aus
Alarm-Led leuchtet kontinuierlich Der Schriftzug Flw blinkt Bsp. `Man F` `Flw P100%`	Durchflussalarm aktiv, die Pumpe hat nicht die programmierten Signale vom Durchflusssensor empfangen.	Die Taste start/stop drücken
Bsp. `Parameter Error` `PROG to default`	Interner Kommunikationsfehler der CPU.	Die Taste PROG drücken, um auf die Default-Parameter rückzustellen.

Panel de control – TEKNA TPG



	Acceso al menú de programación.
	Durante el funcionamiento de la bomba: Si se pulsa visualiza cíclicamente en el display los valores programados; si se pulsa simultáneamente a las teclas   aumenta o disminuye un valor dependiente del modo de funcionamiento escogido. En programación ejerce la función "enter", es decir, confirma la entrada de los diferentes niveles del menú y las modificaciones en el interior de los mismos.
	Pone en marcha y detiene la bomba. En condiciones de alarma de nivel (sólo función de alarma), de alarma de flujo y alarma *memory* activas, desactiva la señalización en el display.
	Para "salir" de los diferentes niveles del menú. Antes de salir definitivamente de la programación se accede a la solicitud de memorización de las modificaciones.
	Desplaza los menús hacia arriba o aumenta los valores numéricos a modificar. En modo Batch puede poner en marcha la dosificación.
	Desplaza los menús hacia abajo o disminuye los valores numéricos a modificar.
	Led verde parpadeante durante la dosificación.
	Led rojo que se enciende durante las diferentes situaciones de alarma.

Conexiones eléctricas



<table>
<tr><td>1</td><td colspan="2" rowspan="2">Relé de Alarma</td></tr>
<tr><td>2</td></tr>
<tr><td>3</td><td>Pole +</td><td rowspan="2">Entrada señal 4-20 mA
Impedancia De Entrada:
200 ohm</td></tr>
<tr><td>4</td><td>Pole -</td></tr>
<tr><td>5</td><td colspan="2" rowspan="2">-Entrada control externo (start-stop)
-Entrada señal de pausa</td></tr>
<tr><td>6</td></tr>
<tr><td>7</td><td colspan="2" rowspan="2">-Entrada señal en frecuencia (contador emisor de impulsos)
-Entrada trigger externo</td></tr>
<tr><td>8</td></tr>
<tr><td>9</td><td colspan="2" rowspan="2">Entrada sensor de Flujo</td></tr>
<tr><td>10</td></tr>
<tr><td>B</td><td colspan="2">Entrada sonda de nivel</td></tr>
</table>

Menú de programación Tekna TPG

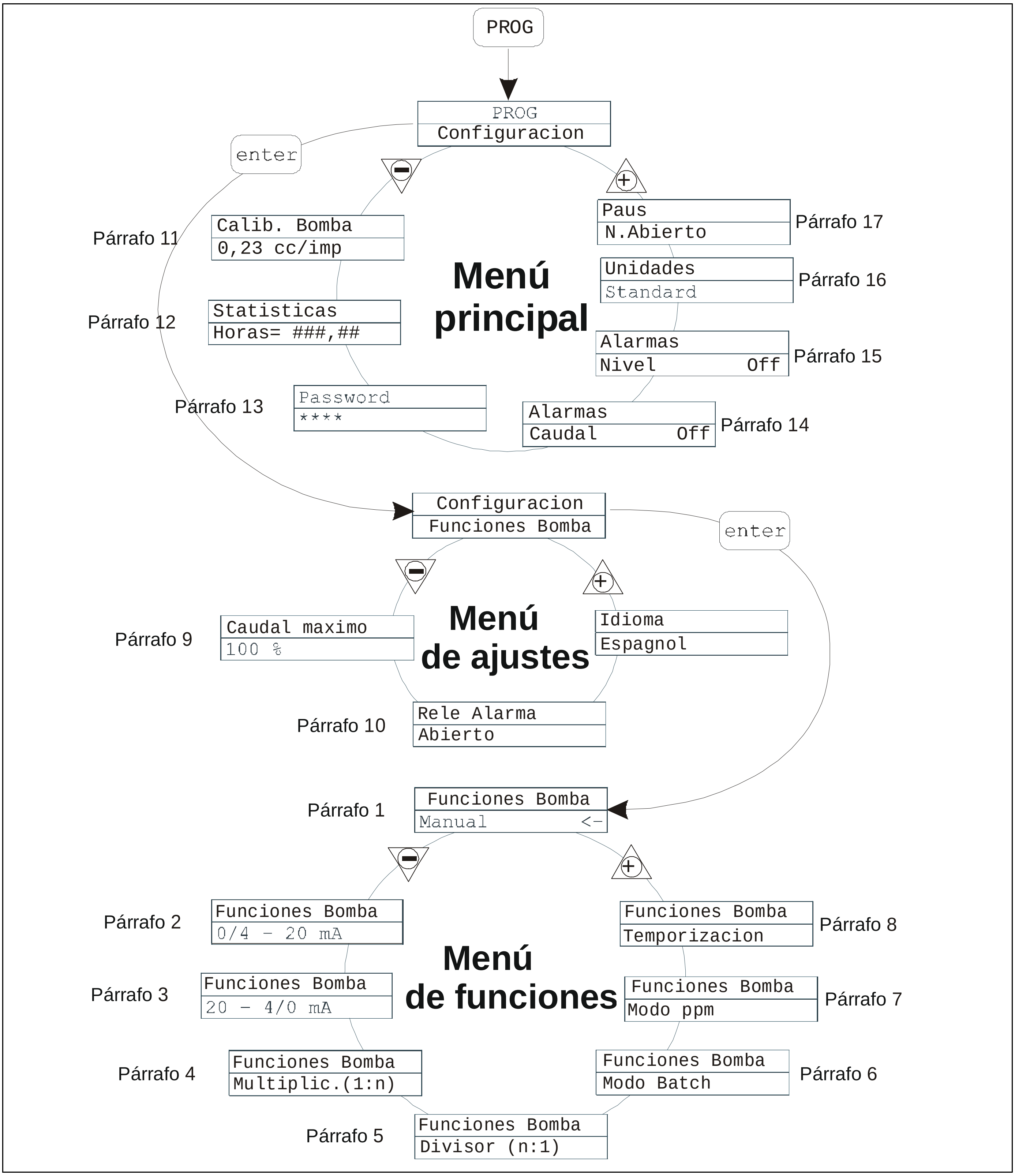
Pulsando la tecla PROG durante más de tres segundos se accede a la programación. Con las teclas ⊕ ⊖ se pueden desplazar las voces del menú, con la tecla mode enter se accede a las modificaciones. En la fábrica la bomba se programa en modo constante. La bomba vuelve automáticamente al modo de funcionamiento después de 1 minuto de inactividad. En este caso los datos que se han introducido no serán memorizados. Con la tecla ESC se sale de los niveles de la programación. Al salir de la programación el display visualiza:

Exit
No Save

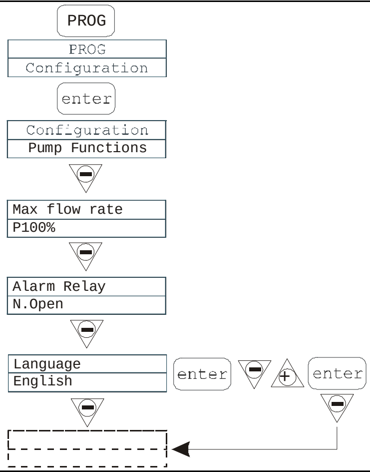
∇ Δ

Exit
Save

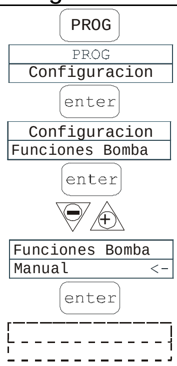
mode enter para confirmar la elección

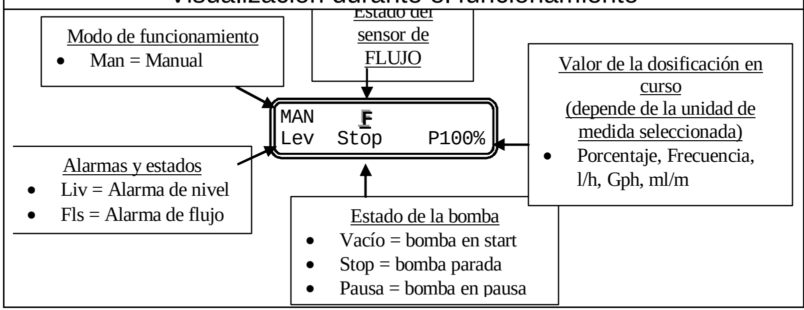
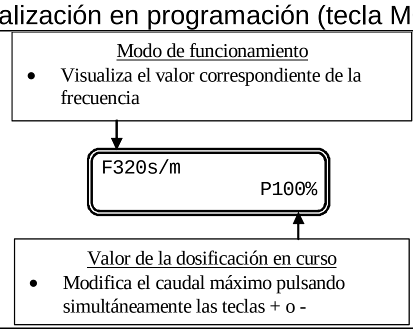


Programación del idioma

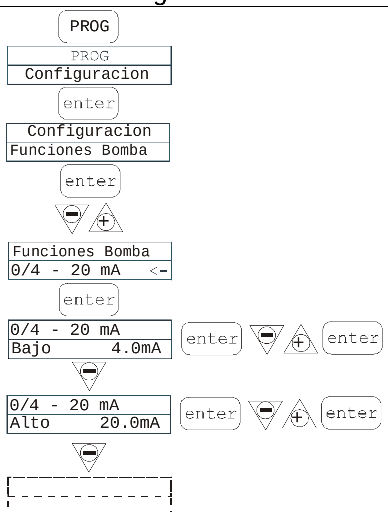
Programación	Funcionamiento
	Permite seleccionar el idioma, en la fábrica la bomba se programa en inglés. Pulsando la tecla mode enter se accede a la modificación, con las teclas ⊕ ⊖ se programa el valor. Con la tecla mode enter se confirma y se vuelve al menú principal.

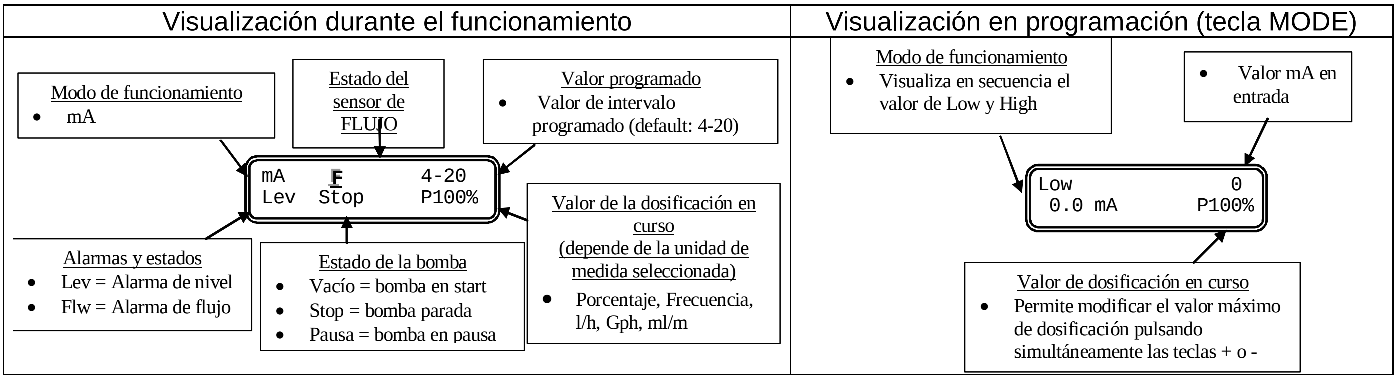
Párrafo 1 – Dosificación manual

Programación	Funcionamiento
	La bomba trabaja en modo constante. El caudal se regula manualmente pulsando simultáneamente las teclas mode enter ⊕ para aumentarlo o las teclas mode enter ⊖ para disminuirlo.

Visualización durante el funcionamiento	Visualización en programación (tecla MODE)
	

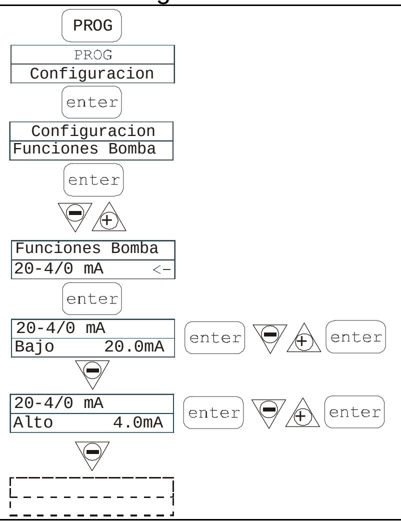
Párrafo 2 – Dosificación Proporcional con señal 0/4-20 mA

Programación	Funcionamiento
	La bomba dosifica proporcionalmente al recibir una señal (0) 4-20 mA. Según su programación de fábrica, la bomba interrumpe la dosificación a 4 mA y dosifica a la máxima frecuencia programada cuando recibe 20 mA. En programación se pueden modificar estos dos valores. La frecuencia máxima se puede modificar durante el funcionamiento pulsando simultáneamente las teclas mode enter ⊕ para aumentar el caudal o las teclas mode enter ⊖ para disminuirlo.



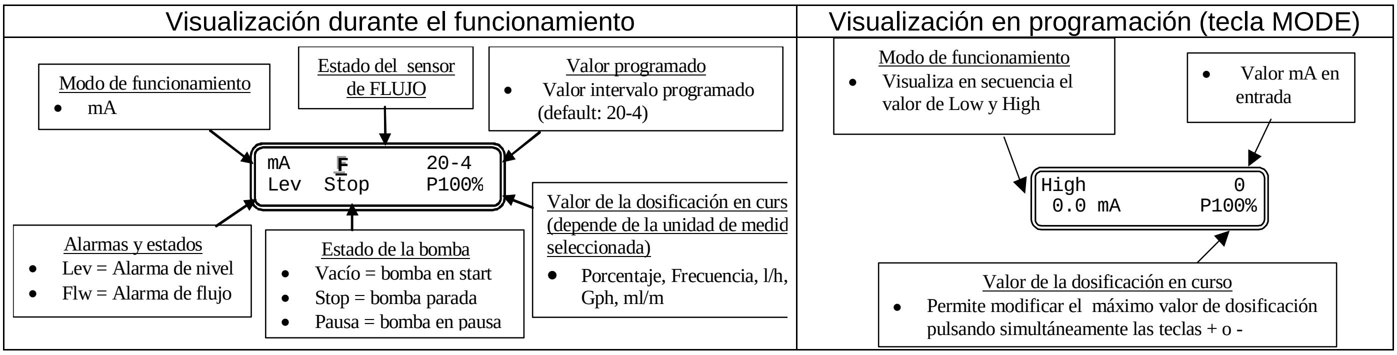
Párrafo 3 – Dosificación Proporcional con señal 20-4/0 mA

Programación



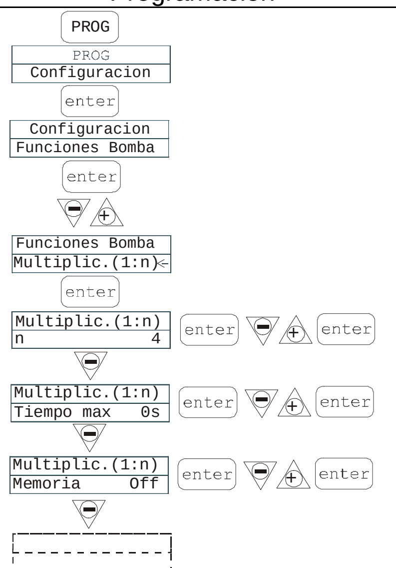
Funcionamiento

La bomba dosifica proporcionalmente al recibir una señal 20-4 (0) mA. Según su programación de fábrica, la bomba interrumpe la dosificación a 20 mA y dosifica a la máxima frecuencia programada cuando recibe 4 mA. En programación es posible modificar estos valores. La frecuencia máxima se puede modificar durante el funcionamiento pulsando simultáneamente las teclas mode enter ⊕ para aumentar el caudal o las teclas mode enter ⊖ para disminuirlo.



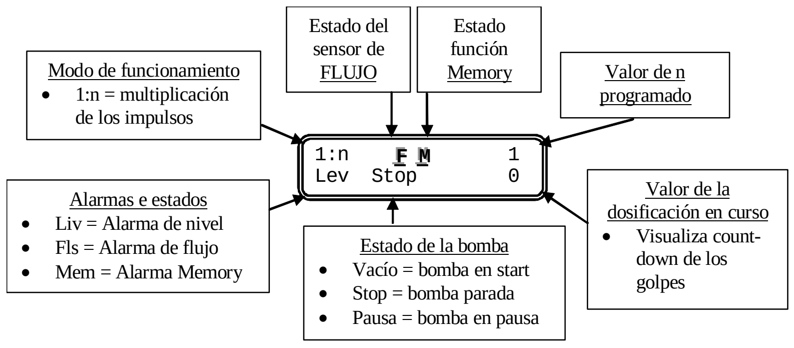
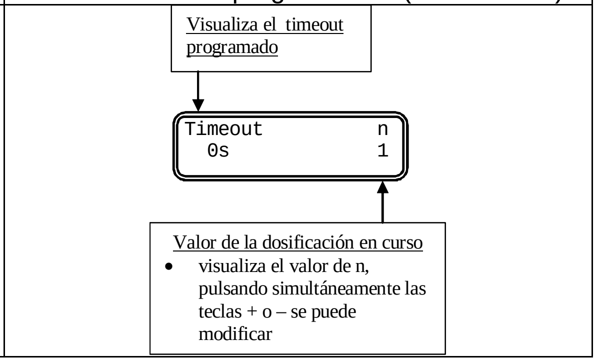
Párrafo 4 – Proporcional con impulsos externos (multiplicación)

Programación

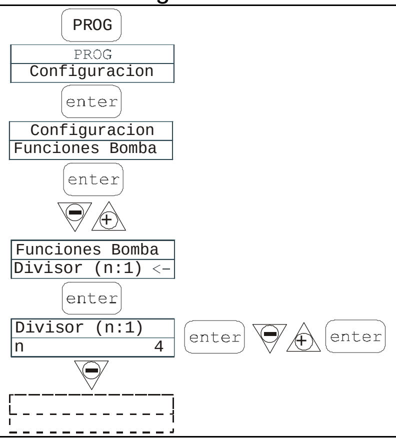


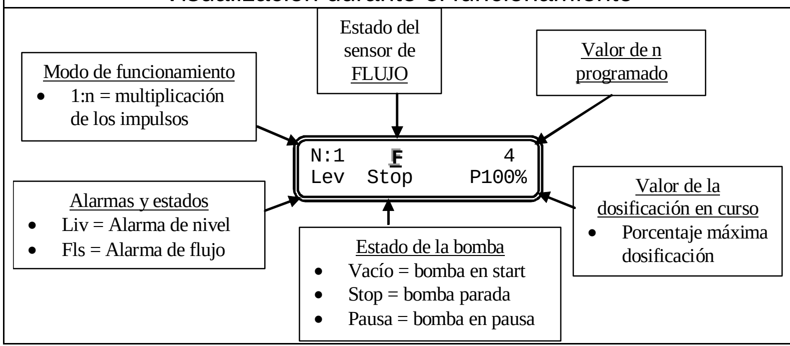
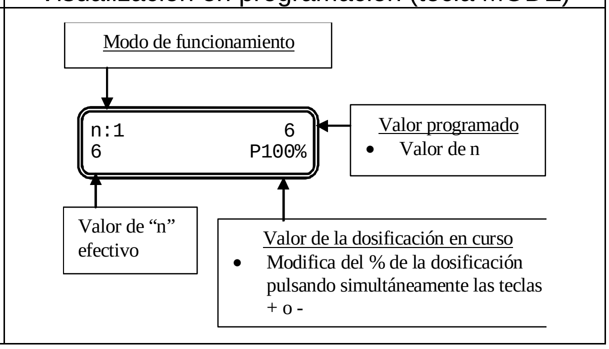
Funcionamiento

La bomba dosifica proporcionalmente al recibir una señal externa (ejemplo: contador lanza impulsos). A cada señal recibida la bomba realiza los “n” golpes programados. La bomba programa automáticamente la frecuencia de la dosificación, adaptándola al tiempo que transcurre entre dos señales sucesivas. Es posible programar en segundos el tiempo (time out) más allá del cual la bomba pone en cero el conteo del intervalo, para evitar dosificaciones en tiempos demasiado largos. La bomba dispone de la función *memory* que señala el recibimiento de una señal durante la dosificación. Si está programada en OFF se limita a señalar, si está programada en ON señala y memoriza los impulsos y los ejecuta cuando termina de recibir señales.
El valor de “n” se puede modificar durante el funcionamiento pulsando simultáneamente las teclas mode enter ⊕ para aumentar el valor del caudal o las teclas mode enter ⊖ para disminuirlo.

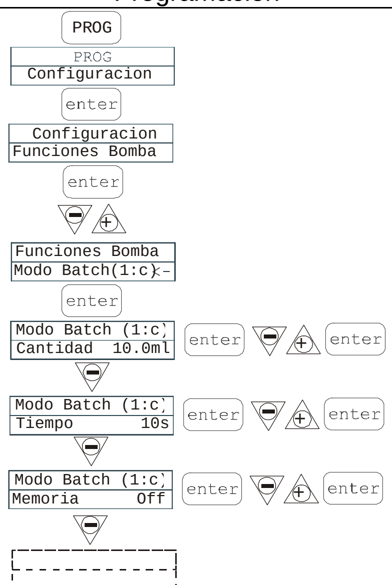
Visualización durante el funcionamiento	Visualización en programación (tecla MODE)
	

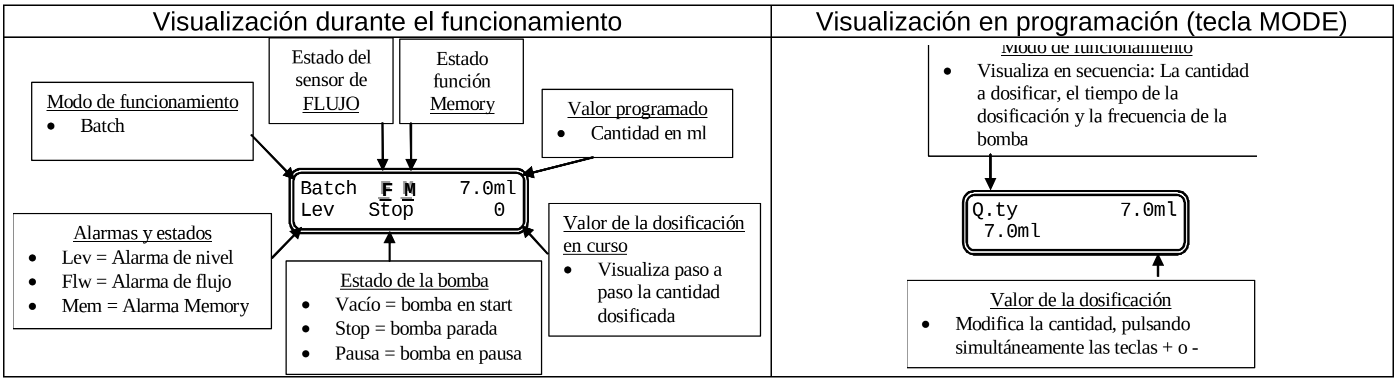
Párrafo 5 – Proporcional con impulsos externos (división)

Programación	Funcionamiento
	La bomba dosifica proporcionalmente al recibir una señal externa (ejemplo: contador lanza impulsos). A cada “n” señales recibidas la bomba realiza un golpe. En programación se programa el valor de “n”. Programando el valor de “n” se programa el % de máxima dosificación, durante el funcionamiento se puede modificar este valor pulsando simultáneamente las teclas mode/enter + para aumentarlo o las teclas mode/enter − para disminuirlo.

Visualización durante el funcionamiento	Visualización en programación (tecla MODE)
	

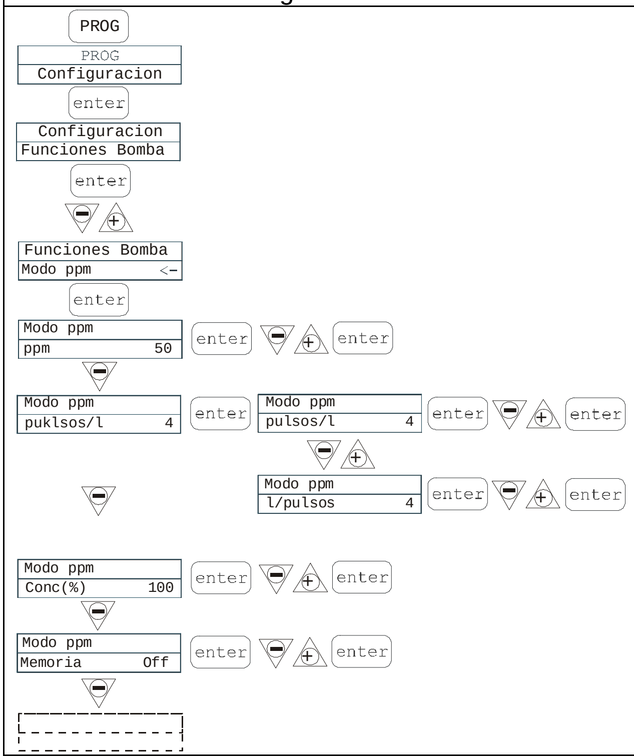
Párrafo 6 – Proporcional con impulsos externos (dosificación Batch)

Programación	Funcionamiento
	La bomba dosifica proporcionalmente al recibir una señal externa (ejemplo: contador lanza impulsos). En este caso se puede programar la cantidad a dosificar en ml y el tiempo para terminar la dosificación. Es posible poner en marca la dosificación manualmente pulsando la tecla + o con un mando remoto. La tecla start/stop interrumpe la dosificación que se puede poner en cero pulsando la tecla + o se puede volver a poner en marcha pulsando otra vez la tecla start/stop. La cantidad a dosificar se puede modificar durante el funcionamiento pulsando simultáneamente las teclas mode/enter + para aumentar el caudal o las teclas mode/enter − para disminuirlo.



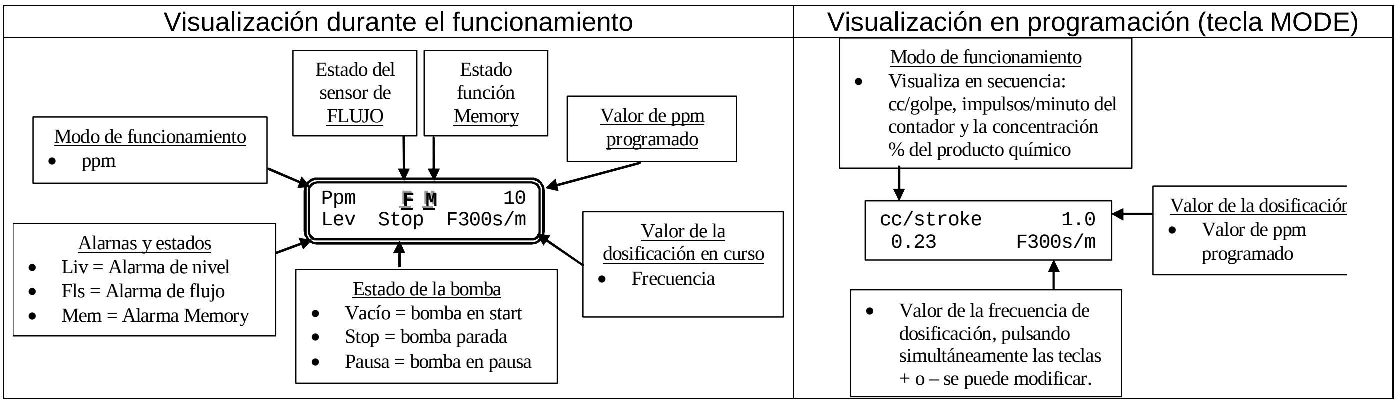
Párrafo 7 – Proporcional con impulsos externos (dosificación en ppm)

Programación

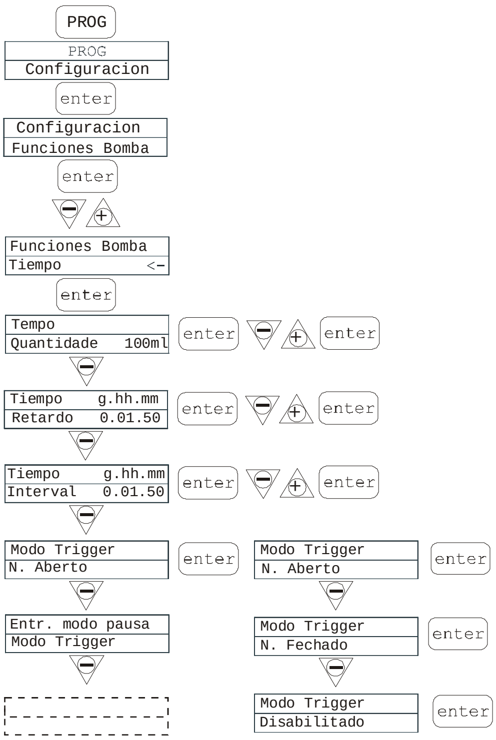


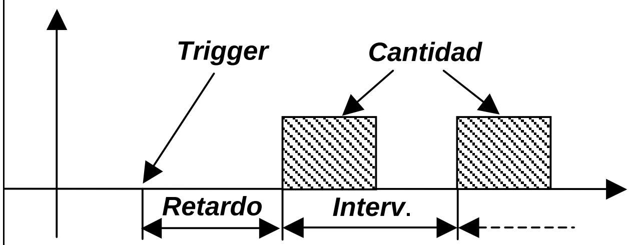
Funcionamiento

La bomba dosifica proporcionalmente al recibir una señal externa (ejemplo: contador lanza impulsos) calculando automáticamente la relación entre las señales en entrada y los golpes de la bomba en función del valor de ppm programado. Los datos que se deben introducir son el valor de ppm, la relación impulsos/litro (o litros/impulso) del contador y la concentración del producto a dosificar. Durante el funcionamiento se puede modificar la frecuencia de la dosificación pulsando simultáneamente las teclas  para aumentarla o las teclas  para disminuirla.

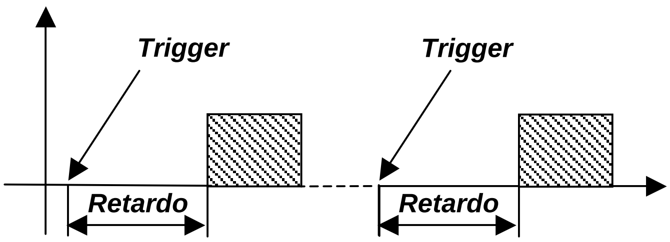


Párrafo 8 – Dosificación temporizada ***(Entrada señal de frecuencia "TRIGGER" activada)***

Programación	Funcionamiento
	Después de recibir la señal de ***TRIGGER*** programada, la bomba dosifica una cantidad programable en ml. Es posible programar un tiempo de retardo antes de la dosificación (***Retardo***) y la distancia entre dosificaciones sucesivas (***Interv***.) como se ilustra en el esquema:

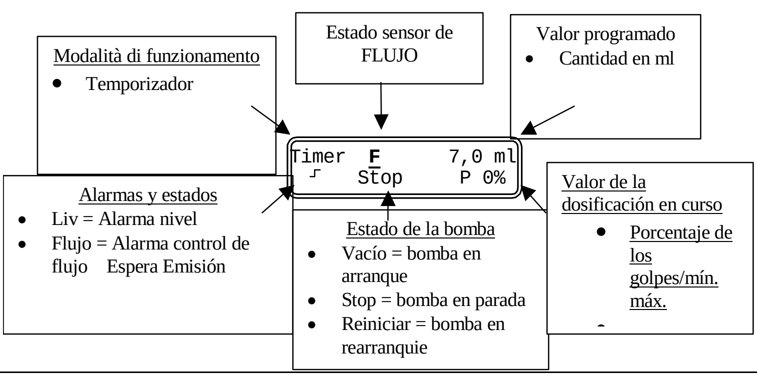
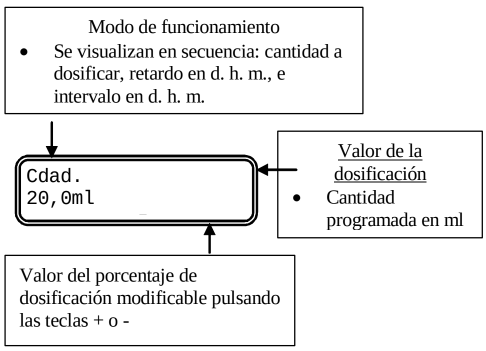


Por ejemplo, programando un tiempo ***Interv***.= 0 se obtiene un sistema en el que la cantidad programada es dosificada después de cada señal de ***TRIGGER*** (con el posible retardo programado):



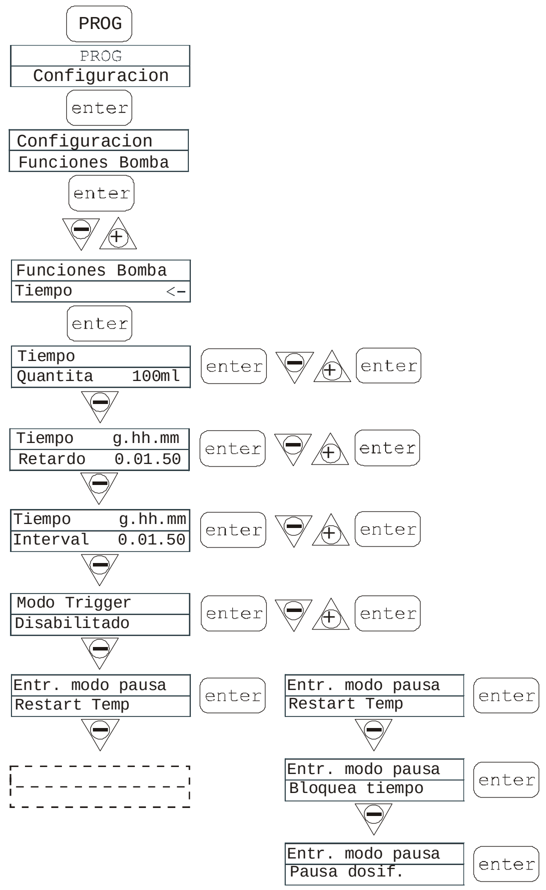
También puede ponerse en marcha la dosificación pulsando la tecla +, que prácticamente simula la señal de ***Trigger***.
La señal ***Trigger*** puede programarse en ***N. Aberto*** (se activa cuando la entrada pasa del modo abierto al cerrado) o en ***N. Fechado*** (se activa cuando la entrada pasa del modo cerrado al abierto).
La señal ***Trigger*** permanece bloqueada durante la dosificación (su recepción no es memorizada ni gestionada).
La entrada ***Pausa*** (***Entrada mando a distancia***) no puede ser programada y su activación bloquea la dosificación, mientras que la siguiente desactivación vuelve a poner el sistema en estado de espera de la señal ***Trigger*** para efectuar una nueva dosificación.

Durante el funcionamiento de la bomba se puede modificar la frecuencia de dosificación pulsando simultáneamente las teclas mode/enter y + para aumentar la frecuencia o las teclas mode/enter y − para disminuirla.

Visualización durante el funcionamiento	Visualización en programación (tecla MODE)
	

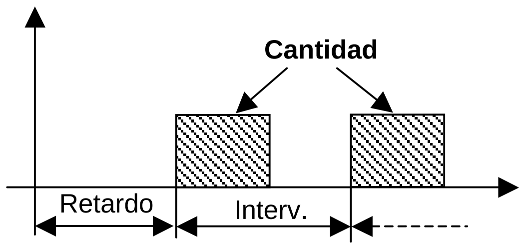
Párrafo 8 – Dosificación temporizada ***(Entrada señal de frecuencia "TRIGGER"no activada)***

Programación



Funcionamiento

La bomba dosifica una cantidad que se puede programar en ml; se puede programar un tiempo de retardo para la puesta en marcha de la bomba (***Retardo***) y la distancia entre dos dosificaciones sucesivas (***Interv.***), como se muestra en el esquema:



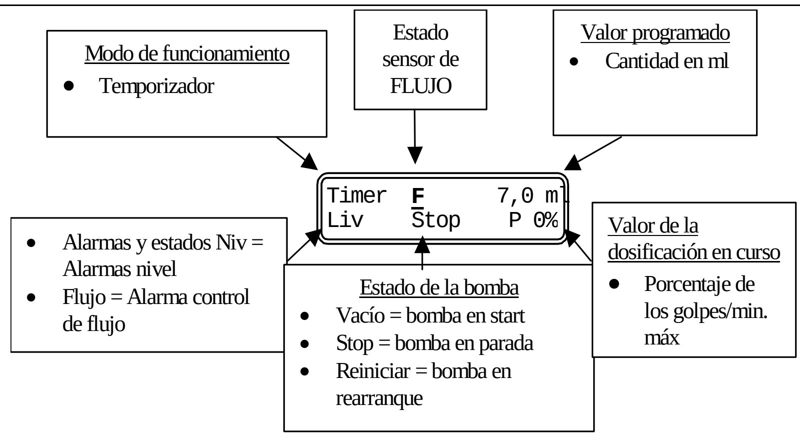
Los tiempos de ***Retardo*** y de ***Interv*** son en d.h.m. (días, horas, minutos).

La entrada de la ***Pausa*** puede programarse de tres modos distintos:

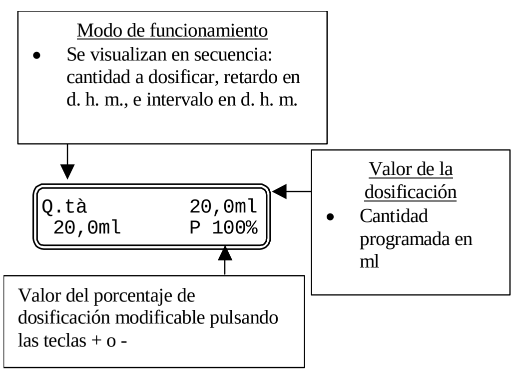
1. ***Bloquea tiempo:*** con la pausa activada, el sistema bloquea el conteo del tiempo actual y lo reanuda cuando se desactiva la pausa.
2. ***Pausa dosificación***: con la pausa activada, el sistema sigue contando el tiempo y bloquea la dosificación
3. ***Restart temp***: con la pausa activada, el sistema bloquea la dosificación y al desactivarse la pausa el conteo empieza de nuevo desde el principio.

Durante el funcionamiento de la bomba se puede modificar la frecuencia de dosificación pulsando simultáneamente las teclas mode enter ⊕ para aumentar la frecuencia o las teclas mode enter ⊖ para disminuirla.

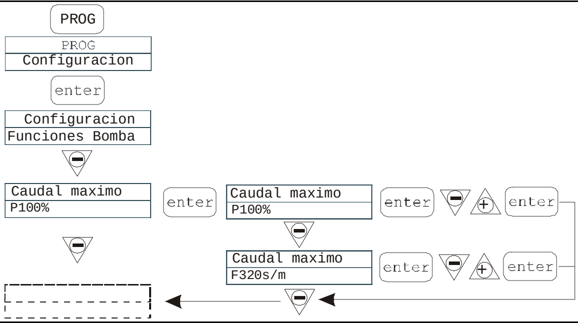
Visualización durante el funcionamiento



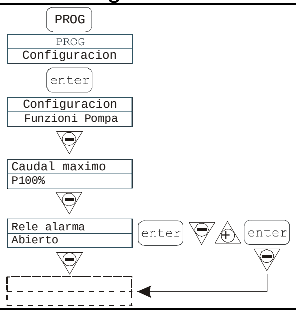
Visualización en programación (tecla MODE)



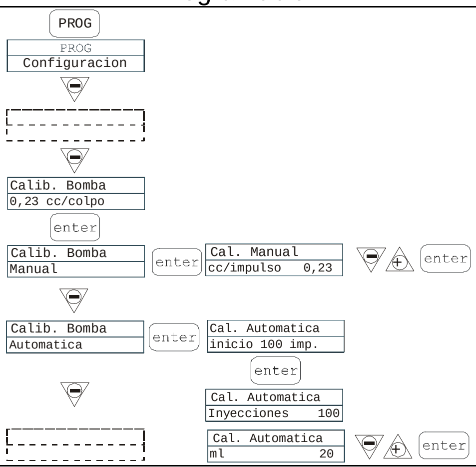
Párrafo 9 – Programación del caudal máximo

Programación	Funcionamiento
	Permite programar el caudal máximo que la bomba puede alcanzar; el modo programado (% o frecuencia) se vuelve la visualización del caudal en la unidad de medida estándar. Pulsando la tecla se accede a la modificación, después con las teclas se programa el valor. Con la tecla se confirma y se vuelve al menú principal.

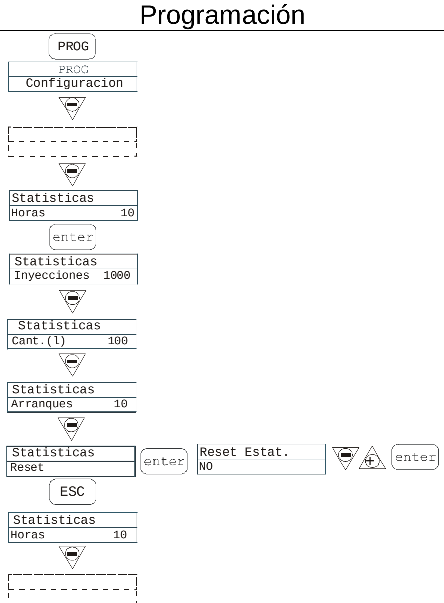
Párrafo 10 – Programación del relé de alarma

Programación	Funcionamiento
	En ausencia de una situación de alarma se puede programar abierto (fábrica) o cerrado. Pulsando la tecla se accede a la modificación, después con las teclas se programa el valor. Con la tecla se confirma y se vuelve al menú principal.

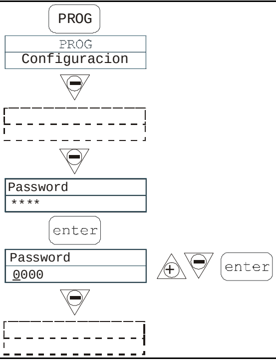
Párrafo 11 – Calibración del caudal

Programación	Funcionamiento
	En el menú principal aparece el valor de cc por golpe en memoria. Se puede calibrar en dos modos: MANUAL – Introduciendo manualmente el valor de cc cada golpe con las teclas y confirmando con la tecla . AUTOMÁTICA – La bomba realiza 100 golpes, poner en marcha y confirmar con la tecla al final introducir la cantidad aspirada por la bomba con las teclas y confirmar con la tecla . El dato introducido será utilizado en los cálculos de los caudales.

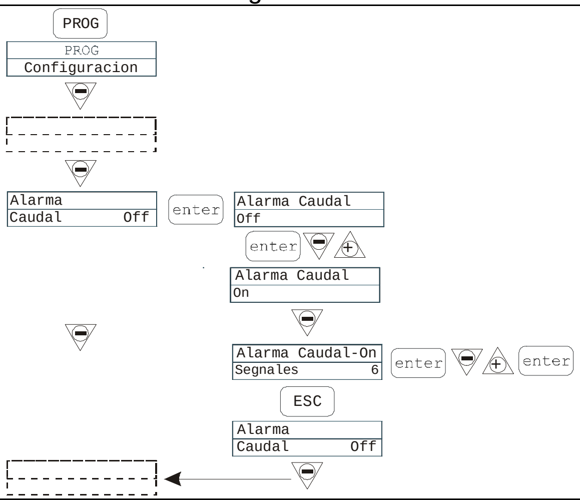
Párrafo 12 – Stadísticas

Programación	Funcionamiento
	En el menú principal visualiza las horas de funcionamiento de la bomba, pulsando la tecla se accede a las demás estadísticas: - *Strokes* = Número de golpes realizados por la bomba. - *Q.ty* (L) = Cantidad dosificada por la bomba expresada en litros; este valor se calcula en base al valor cc/*stroke* en memoria. - *Power* = Número de puestas en marcha de la bomba. - *Reset* = Con las teclas se pueden poner en cero (YES) o no (NO) los contadores, con la tecla se confirma. Pulsando la tecla se vuelve al menú principal.

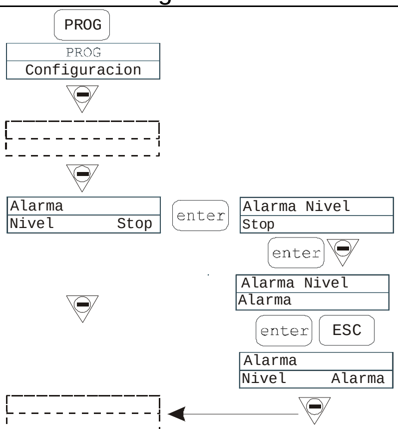
Párrafo 13 - Password

Programación	Funcionamiento
	Introduciendo la password se puede entrar en programación y ver todos los valores programados, pero cada vez que se quieran modificar será solicitada la password. La línea parpadeante indica el número que se puede modificar, con la tecla se selecciona el número (de 1 a 9), con la tecla se selecciona el número a modificar y con la tecla se confirma. Programando “0000” (fábrica) la password queda excluida.

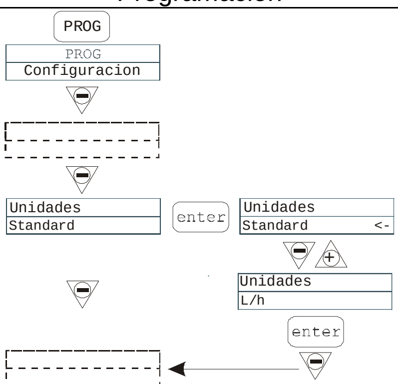
Párrafo 14 – Alarma de flujo

Programación	Funcionamiento
	Permite activar (desactivar) el sensor de flujo. Una vez activado (ON) pulsando la tecla se accede a la solicitud de cuántas señales espera la bomba antes de entrar en alarma. Pulsando la tecla el número parpadea, con las teclas se puede programar el valor. Con la tecla se confirma. Pulsando la tecla se vuelve al menú principal.

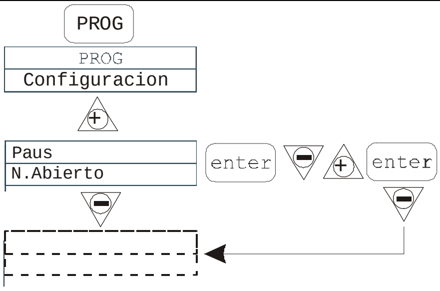
Párrafo 15 – Alarma de nivel

Programación	Funcionamiento
	Permite programar la bomba cuando se activa la alarma del sensor de nivel, es decir se bloquea la dosificación (Stop) o simplemente activa la señal de alarma sin bloquear la dosificación. Pulsando la tecla se accede a la modificación, con las teclas se puede programar el tipo de alarma. Con la tecla se confirma. Pulsando la tecla se vuelve al menú principal.

Párrafo 16 – Unidad de visualización del caudal

Programación	Funcionamiento
	Permite programar la unidad de medida de la dosificación con el display en visualización. Pulsando la tecla se accede a la modificación, con las teclas se programa el tipo de unidad de medida, l/h (litros/hora), Gph (galones/hora), ml/m (mililitros/minuto) o estándar (% o frecuencia, según como haya sido programado). Con la tecla se confirma y se vuelve al menú principal.

Párrafo 17 - Programación Pausa

Programación	Funcionamiento
	Entrada esterna de paro de bomba. De fábrica el sistema llega configurado como Normalmente Abierto. Pulsando la tecla se accede a la modificación, después con las teclas se programa el valor (N. ABIERTO o N. CERRADO.) Con la tecla se confirma y se vuelve al menú principal.

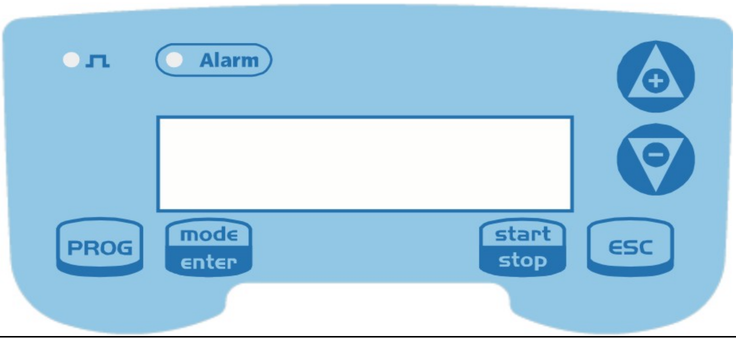
Ajuste contraste display

Para ajustar el contraste del display mantener presionada la tecla y dentro de 5 segundos presionar las teclas o para aumentar o disminuir el contraste

Alarmas

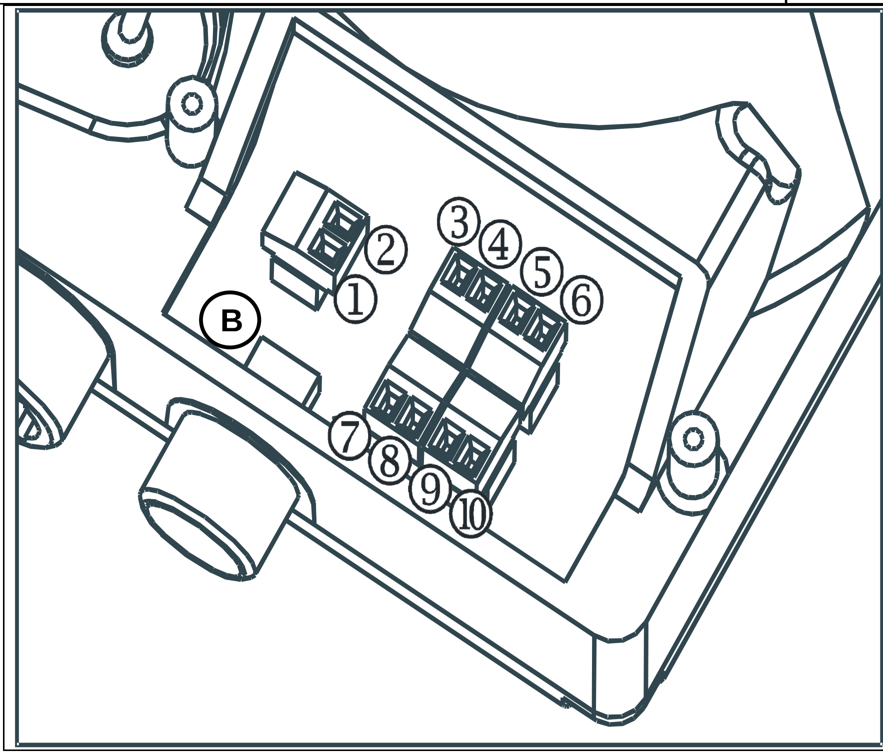
Visualización	Causa	Interrupción
Led Alarma fijo Mensaje Lev parpadeante Ej: Man Lev P100%	Alarma de final del nivel sin interrupción del funcionamiento de la bomba.	Reestablecer el nivel del líquido.
Led Alarma fijo Mensajes Lev y stop parpadeantes Ej: Man Lev Stop P100%	Alarma final del nivel con interrupción del funcionamiento de la bomba.	Reestablecer el nivel del líquido.
Mensaje Mem parpadeante Ej: 1:n 6 Mem	La bomba recibe uno o más impulsos durante la dosificación con la función *memory* en OFF.	Pulsar la tecla start stop
Mensaje Mem parpadeante Ej: 1:n **M** 6 Mem	La bomba recibe uno o más impulsos durante la dosificación con la función *memory* en ON.	Cuando la bomba termina de recibir los impulsos externos devuelve los golpes memorizados.
Led Alarma fijo Mensaje Flw parpadeante Ej: Man **F** Flw P100%	Alarma de flujo activa, la bomba no ha recibido el número de señales programadas por el sensor de flujo.	Pulsar la tecla start stop
Ej: Parameter Error PROG to default	Error de comunicación interna de la CPU.	Pulsar la tecla PROG para reestablecer los parámetros de *default*.

Panneau de contrôle – TEKNA TPG



	Accès au menu de programmation
	Pendant la phase de fonctionnement de la pompe: si cette touche est enfoncée elle affiche à des intervalles réguliers les valeurs programmées; si elle est enfoncée en même temps que les touches   elle augmente ou réduit une valeur dépendant du mode de fonctionnement choisi. Au cours de la programmation, elle fait fonction de “enter”, c’est-à-dire qu’elle confirme l’entrée dans les différents niveaux de menu et les modifications à l’intérieur de ces derniers.
	Fait démarrer et met à l’arrêt la pompe. Dans les conditions d’alarme de niveau (unique fonction d’alarme), de flux et de mémoires actives, elle désactive la signalisation sur l’afficheur.
	Pour “quitter” ces différents niveaux de menu. Avant de quitter définitivement la programmation, on accède à la demande d’enregistrement des modifications
	Fait défiler les menus vers le haut ou augmente les valeurs numériques à modifier. En mode de fonctionnement Batch, elle peut faire démarrer le dosage.
	Fait défiler les menus vers le bas, ou réduit les valeurs numériques à modifier.
	Led verte clignotante pendant le dosage.
	Led rouge qui s’allume dans les différentes situations d’alarme.

Connexions électriques

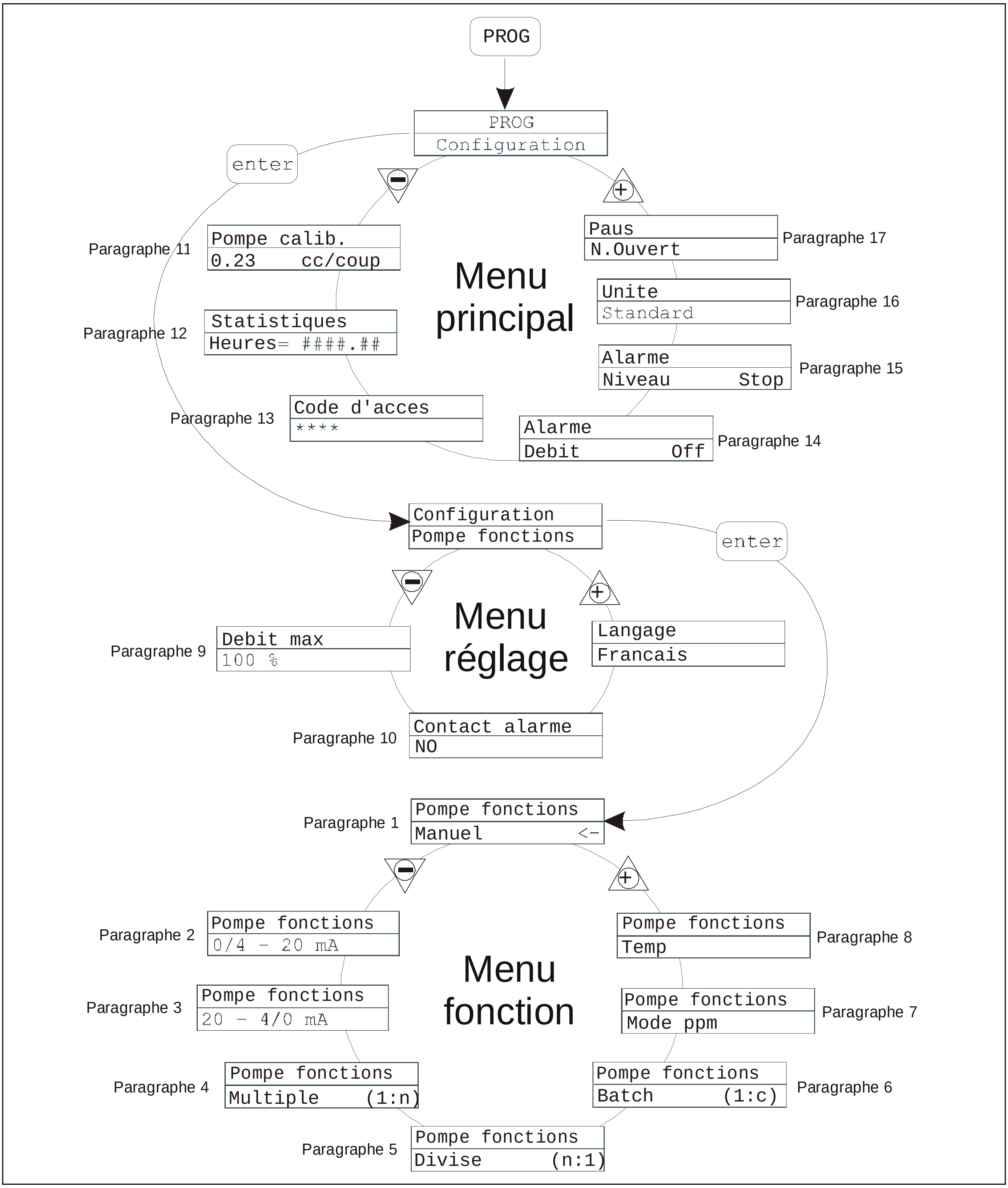


1	Relais Alarme	
2		
3	Pole +	Entrée signal 4-20 mA Impédance D'Entrée: 200 ohm
4	Pole -	
5	-Entrée commande à distance (start-stop) -Entrée Pausa signal	
6		
7	-Entrée signal fréquence (compteur émetteur d’impulsions) -Entrée Detente externo	
8		
9	Entrée capteur de débit	
10		
B	Entrée sonde de niveau	

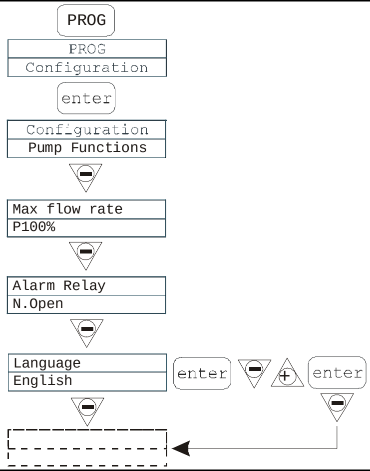
Appuyer sur la touche PROG pendant plus de trois secondes pour allumer la programmation. Avec les touches ⊕ ⊖ il est possible de faire défiler les options du menu, la touche mode enter permet d'accéder aux modifications.

La pompe est programmée en usine en mode constant. La pompe reprend automatiquement le mode de fonctionnement après 1 minute de non-activité. Dans ce cas, les données éventuellement introduites ne sont pas enregistrées. La touche ESC permet de quitter les niveaux de la programmation. À la sortie de la programmation, l'afficheur visualise :

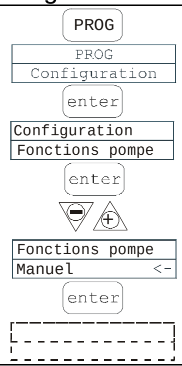
Exit		Exit	
No Save	∇ Δ	Save	mode enter Pour confirmer le choix

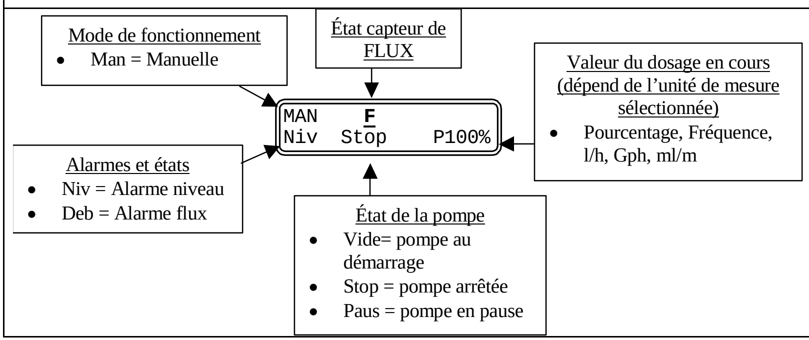
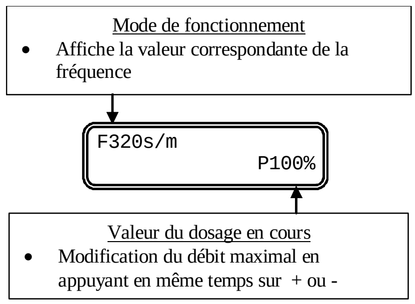


Programmation de la langue

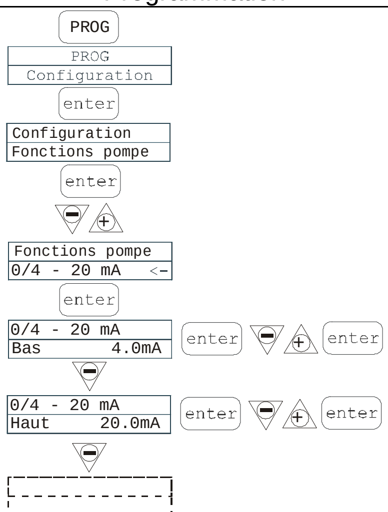
Programmation	Fonctionnement
	Permet de sélectionner la langue, la pompe est programmée en usine en anglais. Appuyer sur [mode enter] pour accéder à la modification, puis sur les touches [+] [−] pour programmer la valeur. La touche [mode enter] confirme et permet de retourner au menu principal.

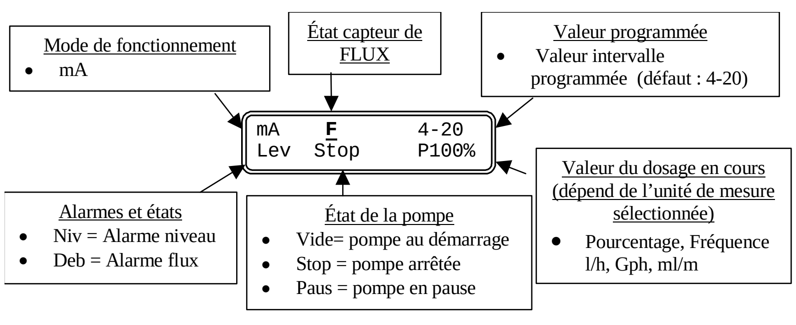
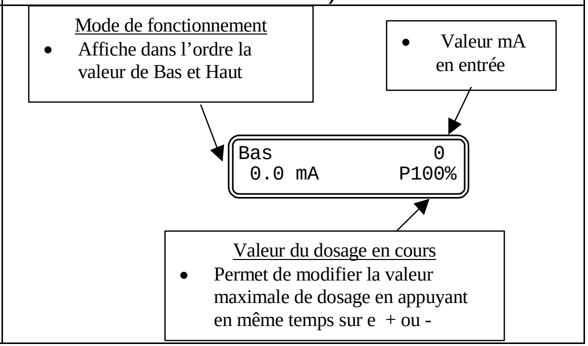
Paragraphe 1 –Dosage manuel

Programmation	Fonctionnement
	La pompe travaille en mode constant et le débit peut être réglé uniquement en mode manuel en appuyant simultanément sur les touches [mode enter] [+] pour augmenter le débit ou sur les touches [mode enter] [−] pour le réduire.

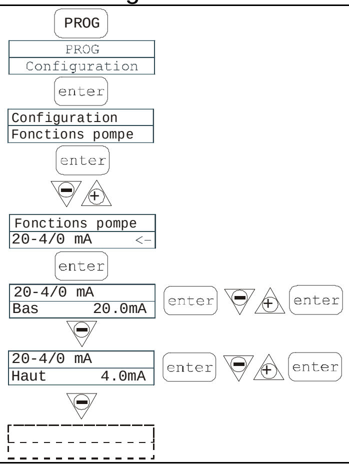
Affichage pendant le fonctionnement	Affichage lors de la programmation (touche MODE)
	

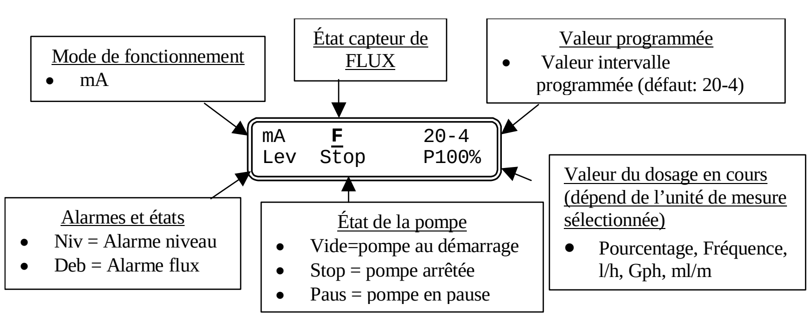
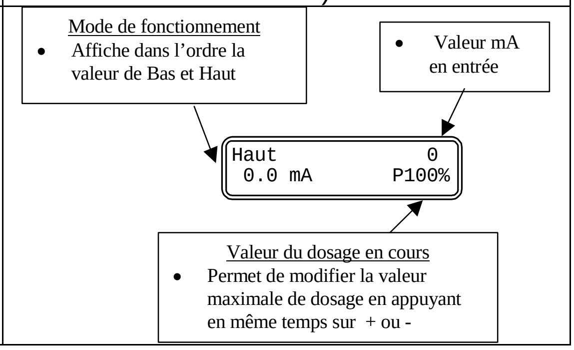
Paragraphe 2 – Dosage Proportionnel sur signal 0/4-20 mA

Programmation	Fonctionnement
	La pompe dose proportionnellement sur un signal (0)4-20 mA. La programmation d'usine de la pompe prévoit l'interruption du dosage à 4 mA et le dosage à la fréquence maximale programmée lorsqu'elle reçoit 20 mA. En cours de programmation, il est possible de modifier ces deux valeurs. La fréquence maximale est modifiable pendant le fonctionnement en appuyant simultanément sur les touches [mode enter] [+] pour augmenter le débit ou sur les touches [mode enter] [−] pour le réduire.

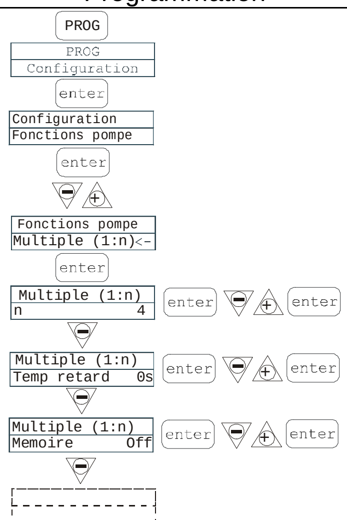
Affichage pendant le fonctionnement	Affichage lors de la programmation (touche MODE)
	

Paragraphe 3 – Dosage proportionnel sur signal 20-4/0 mA

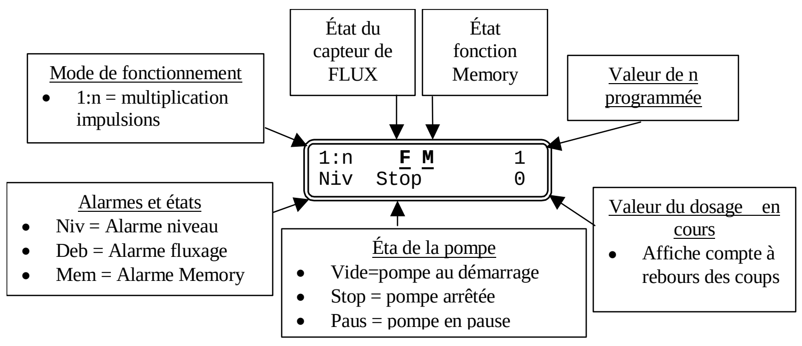
Programmation	Fonctionnement
	La pompe dose proportionnellement sur un signal 20-4 (0) mA. La programmation d'usine de la pompe prévoit l'interruption du dosage à 20 mA et le dosage à la fréquence maximale programmée lorsqu'elle reçoit 4 mA. En cours de programmation, il est possible de modifier ces deux valeurs. La fréquence maximale est modifiable pendant le fonctionnement en appuyant simultanément sur les touches mode enter ⊕ pour augmenter le débit ou sur les touches mode enter ⊖ pour le réduire.

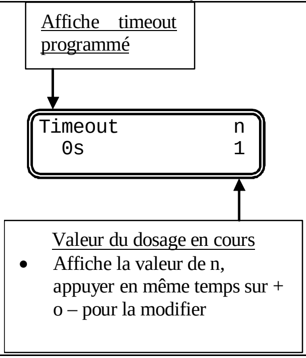
Affichage pendant le Fonctionnement	Affichage lors de la programmation (touche MODE)
	

Paragraphe 4 – Proportionnel à des impulsions extérieures (multiplications)

Programmation	Fonctionnement
	La pompe dose proportionnellement à un signal extérieur (ex.: compteur de lancement d'impulsions). À chaque signal reçu, la pompe effectue les "n" coups programmés. La pompe programme automatiquement la fréquence de dosage, en l'adaptant au temps qui s'écoule entre deux signaux successifs. Il est possible de programmer en secondes le temps (timeout) outre lequel la pompe remet à zéro le comptage de l'intervalle, pour éviter des dosages dans des temps trop longs. La pompe dispose de la fonction mémoire qui signale la réception d'un signal durant le dosage. En la programmant sur Off, elle se limite à signaler, si elle est sur On, elle signale et mémorise les impulsions, puis elle les exécute lorsqu'elle cesse de recevoir des signaux. La valeur de "n" est modifiable durant la phase de fonctionnement en appuyant simultanément sur les touches mode enter ⊕ pour augmenter la valeur du débit ou sur les touches mode enter ⊖ pour la réduire.

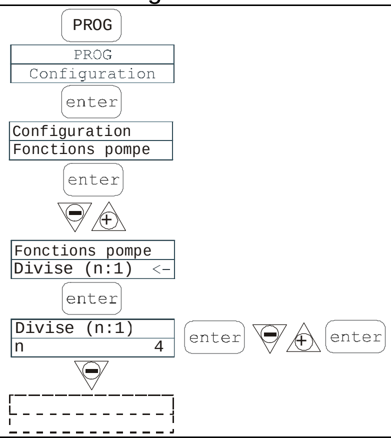
Affichage durant le Fonctionnement	Affichage lors de la programmation (touche MODE)



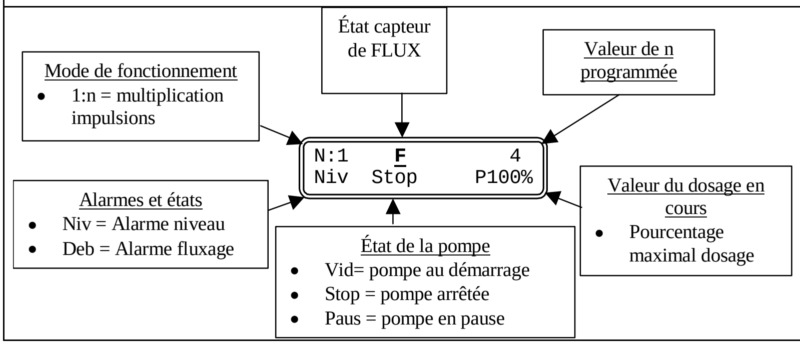


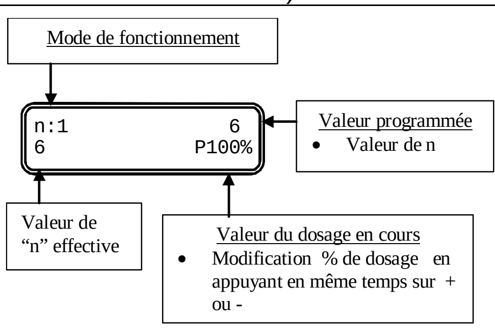
Paragraphe 5 – Proportionnel à impulsions extérieures (division)

Programmation	Fonctionnement
	La pompe dose proportionnellement à un signal extérieur (ex. : compteur de lacement d'impulsions). À chaque "n" signaux reçus, la pompe exécute un coup. Programmer la valeur de "n". En programmant la valeur de "n" on programme le % de dosage maximal, durant la phase de fonctionnement, il est possible de modifier cette valeur en appuyant simultanément sur les touches mode enter (+) pour l'augmenter ou sur les touches mode enter (–) pour la réduire.



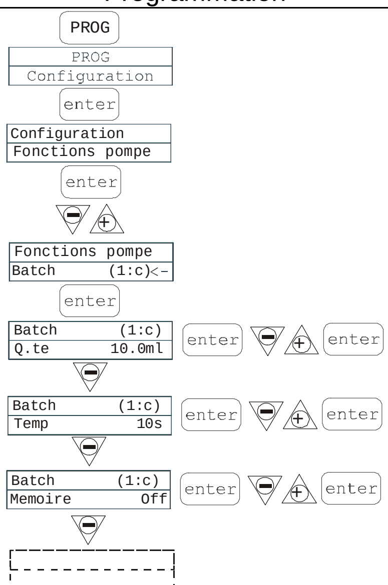
Affichage pendant le fonctionnement	Affichage lors de la programmation (touche MODE)

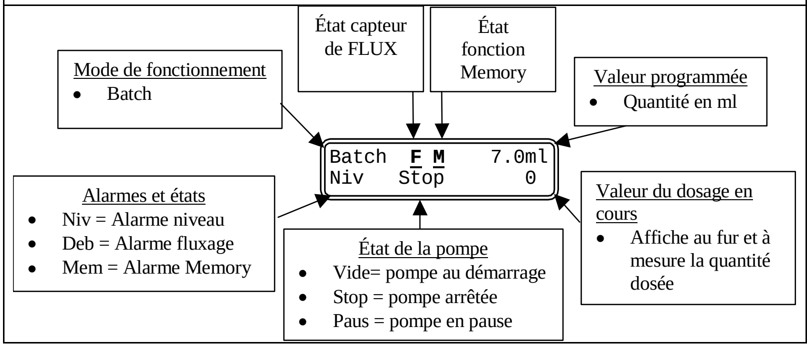
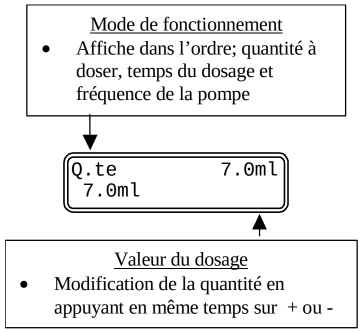




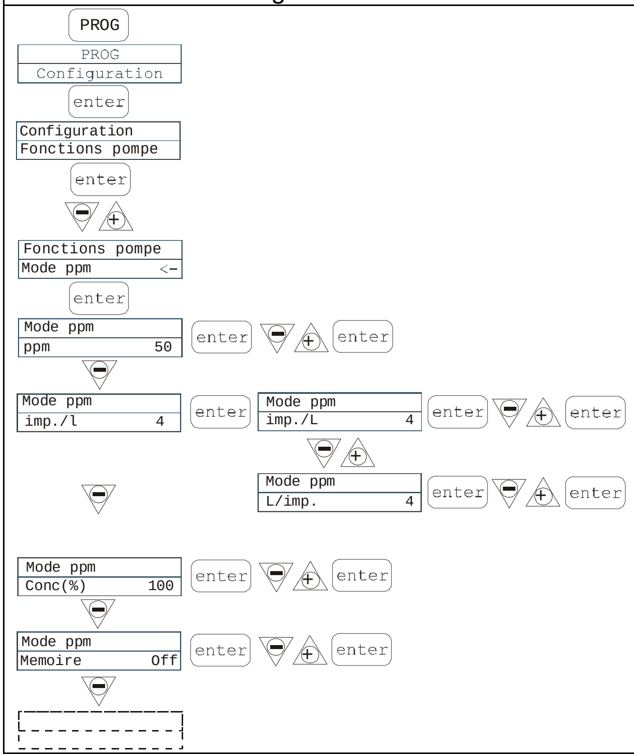
Paragraphe 6 – Proportionnel à impulsions extérieures (dosage Batch)

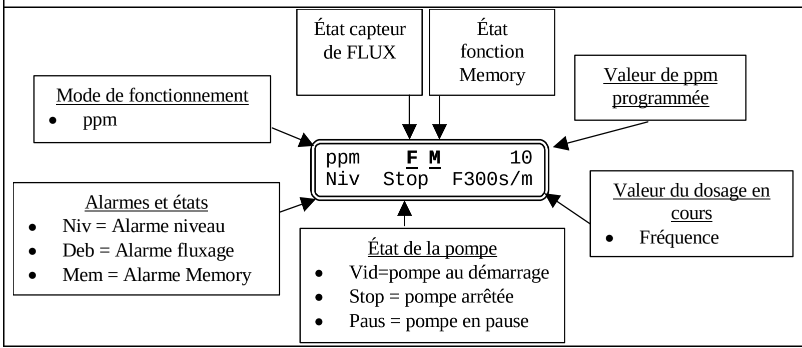
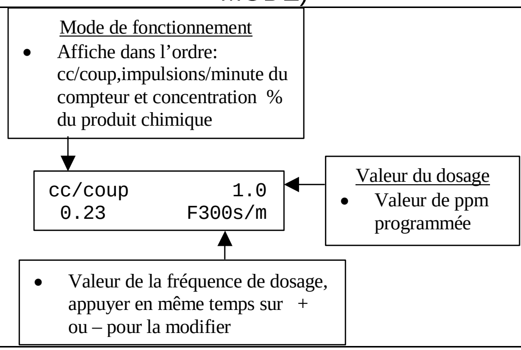
Programmation	Fonctionnement
	La pompe dose proportionnellement à un signal extérieur (ex : compteur de lancement d'impulsions). Dans ce cas, il est possible de programmer la quantité à doser en ml et l'intervalle dans les limites duquel compléter le dosage. Il est possible d'activer manuellement le dosage par la pression de la touche (+), ou à l'aide d'une commande déportée. La touche start stop, interrompt le dosage qui peut être remis à zéro en appuyant sur (+), ou redémarré en appuyant de nouveau sur start stop. La quantité à doser est modifiable durant la phase de fonctionnement en appuyant simultanément sur mode enter (+) pour augmenter le débit ou sur les touches mode enter (–) pour le réduire.



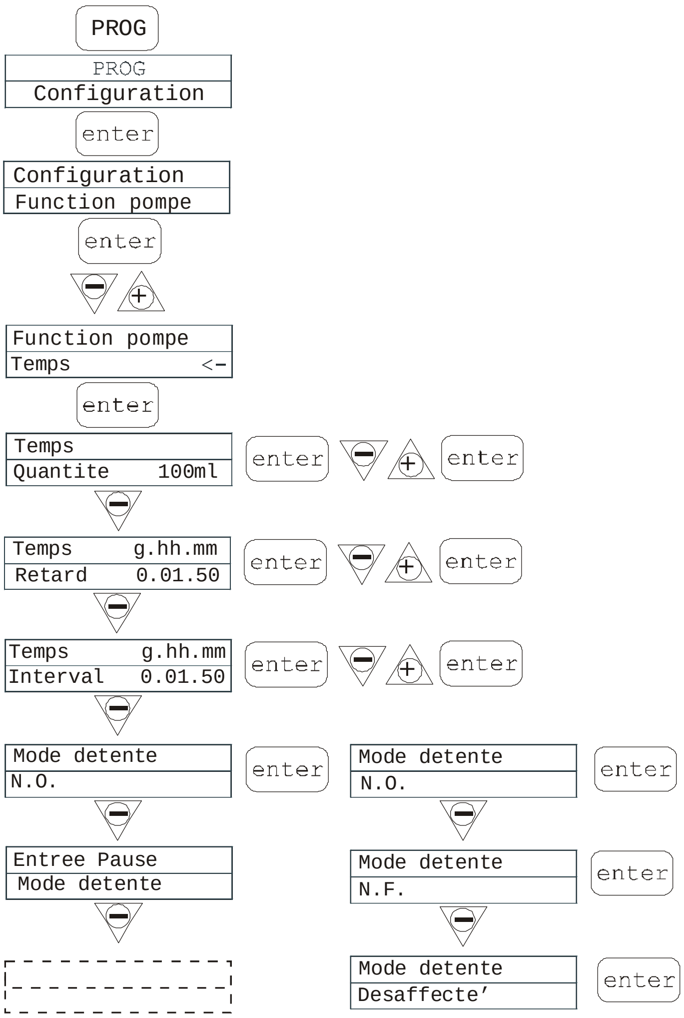
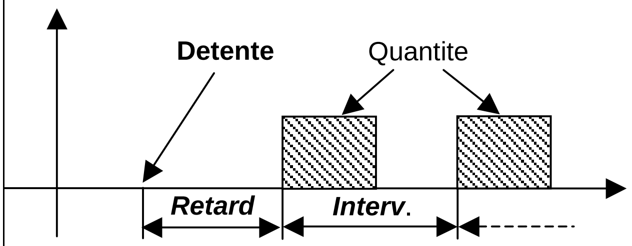
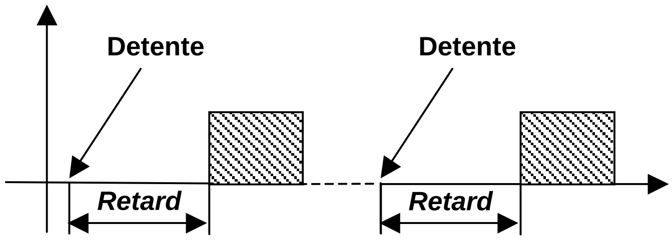
Affichage pendant le fonctionnement	Affichage lors de la programmation (Touche MODE)
	

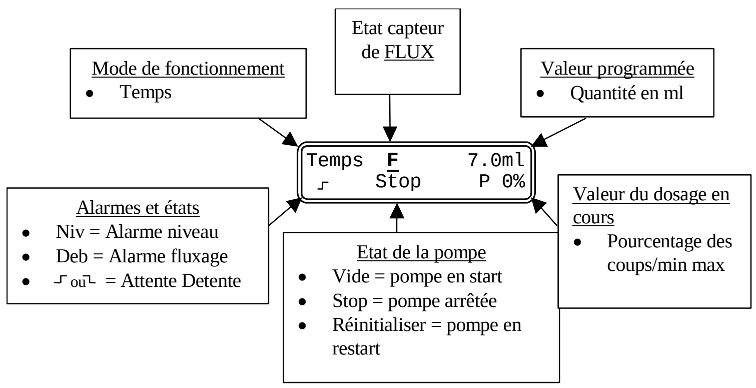
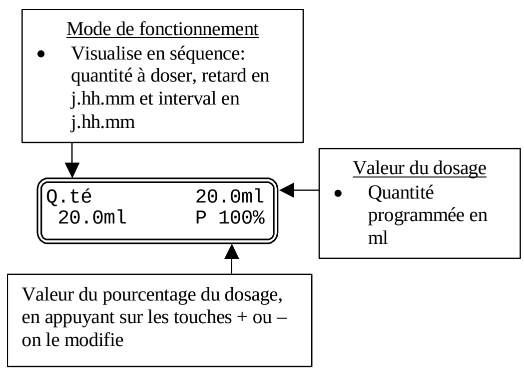
Paragraphe 7 – Proportionnel à impulsions extérieures (dosage en ppm)

Programmation	Fonctionnement
	La pompe dose proportionnellement à un signal extérieur (ex.: compteur de lancement d'impulsions) en calculant automatiquement le rapport entre les signaux entrant et les coups de la pompe en fonction de la valeur de ppm programmée. Les données à insérer sont la valeur de ppm., le rapport impulsions/litre (ou litres/impulsion) du compteur et la concentration du produit à doser. Durant la phase de fonctionnement il est possible de modifier la fréquence de dosage en appuyant simultanément sur   pour l'augmenter ou sur   pour la réduire.

Affichage pendant le fonctionnement	Affichage lors de la programmation (touche MODE)
	

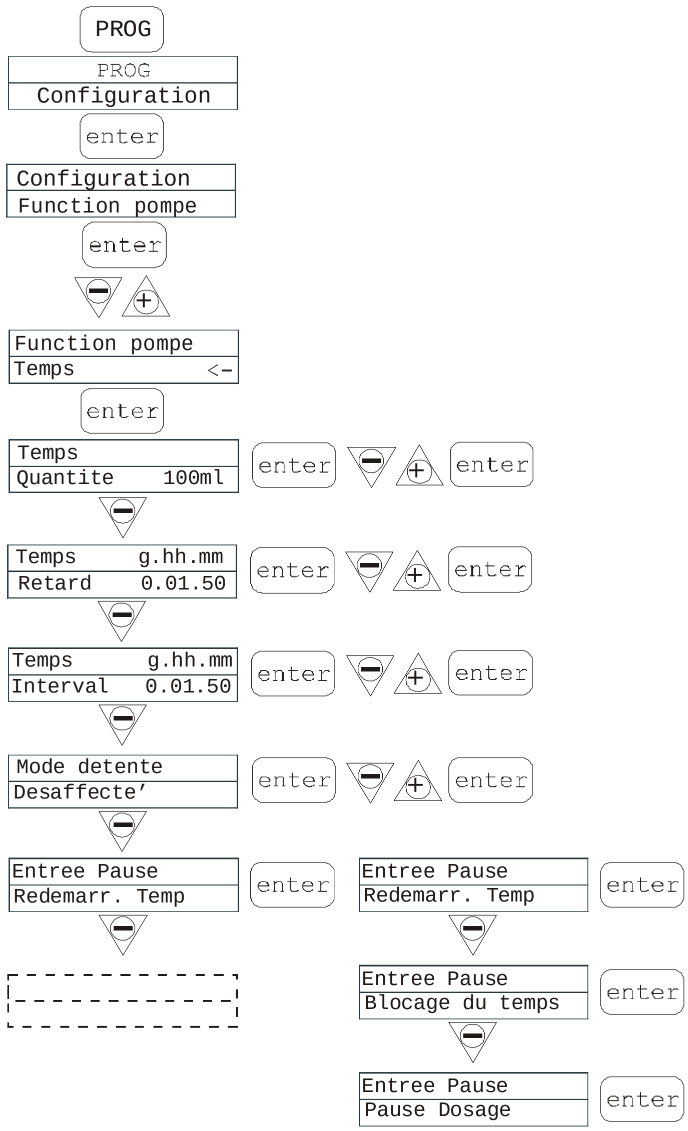
Paragraphe 8 – Dosage temporisé ***(Entrée signal fréquence* «Trigger» activé)**

Programmation	Fonctionnement
	Après l'arrivée du signal de ***DETENTE*** réglé, la pompe dose une quantité programmable en ml. Il est possible de régler un temps de retard avant le dosage (***Retard***) et la distance entre les dosages successifs (***Interv***.), comme d'après le schéma:  En réglant, par exemple, un temps ***Interv***. = 0 on obtient un système dosant la quantité programmée après chaque signal de ***DETENTE*** (avec l'éventuel retard réglé):  Il est possible de faire démarrer le dosage même en appuyant sur la touche +, simulant pratiquement le signal de ***Detente.*** Le signal ***Detente*** peut être réglé ***NO*** (il s'active lorsque l'entrée passe du mode ouvert au mode fermé) ou ***NF*** (il s'active lorsque l'entrée passe du mode fermé au mode ouvert). Le signal ***Detente*** est bloqué pendant le dosage (son arrivée n'est ni mémorisée ni gérée). L'entrée ***Pause*** (***Entrée commande à distance)*** ne peut pas être programmée et son activation bloque le dosage, tandis que la désactivation successive remet le système en attente du signal ***Detente*** pour un nouveau dosage. Pendant la phase de fonctionnement de la pompe, il est possible de modifier la fréquence du dosage, en appuyant en même temps sur les touches [mode enter] [+] pour augmenter la fréquence, ou bien sur les touches [mode enter] [−] pour la diminuer.

Visualisation pendant le fonctionnement	Visualisation en démarche (touche MODE)
	

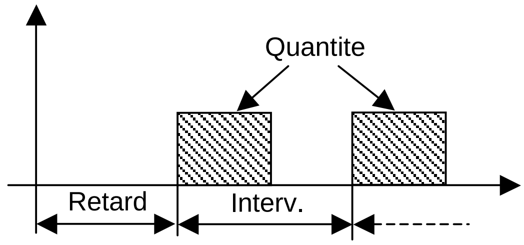
Paragraphe 8 – Dosage temporisé *(Entrée signal fréquence* «Trigger» non activé)

Programmation



Fonctionnement

La pompe dose une quantité programmable en ml, il est possible de régler un temps de retard au démarrage de la pompe (***Retard***) et la distance entre deux dosages successifs (***Interv***.), comme d'après le schéma:



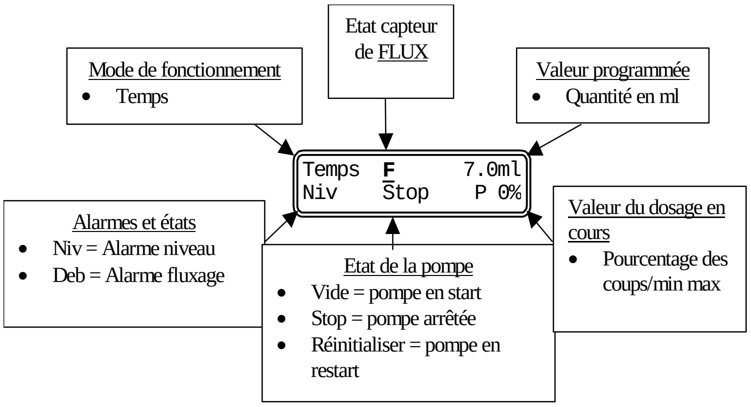
Les temps de ***Retard*** et ***Interv***. sont en jj.hh.mm (jours.heures.minutes)

L'entrée ***Pause*** peut être programmée en trois modes différents:

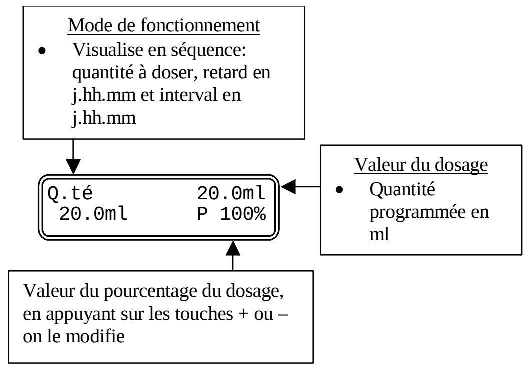
1. ***Blocage du temps***: avec la pause activée, le système bloque le comptage du temps actuel qui reprend quand la pause se désactive
2. ***Pause Dosage***: avec la pause activée, le système continue à compter le temps et bloque le dosage
3. ***Redemarr. Temp***: avec la pause activée, le système bloque le dosage, quand la pause se désactive le comptage recommence dès le début.

Pendant la phase de fonctionnement de la pompe, il est possible de modifier la fréquence du dosage, en appuyant en même temps sur les touches mode enter ⊕ pour augmenter la fréquence, ou bien sur les touches mode enter ⊖ pour la diminuer.

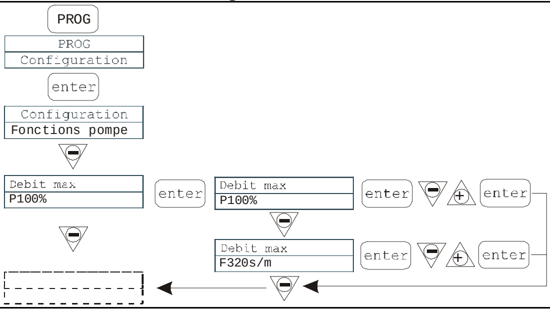
Visualisation pendant le fonctionnement



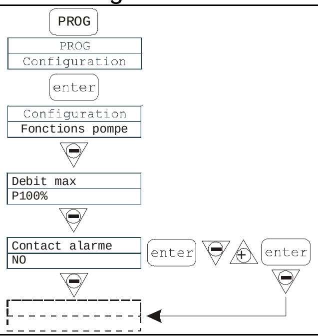
Visualisation en démarche (touche MODE)



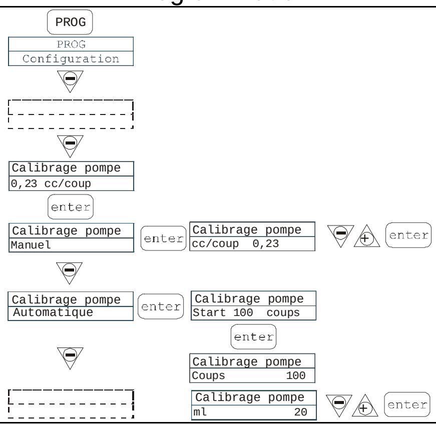
Paragraphe 9 – Programmation débit maximal

Programmation	Fonctionnement
	Permet de programmer le débit maximal pouvant être atteint par la pompe et le mode programmé (% ou fréquence) devient l'affichage du débit dans l'unité de mesure standard. Appuyer sur [mode enter] pour accéder à la modification puis sur les touches [+] [−] pour programmer la valeur- Avec [mode enter] confirmer et retourner au menu principal.

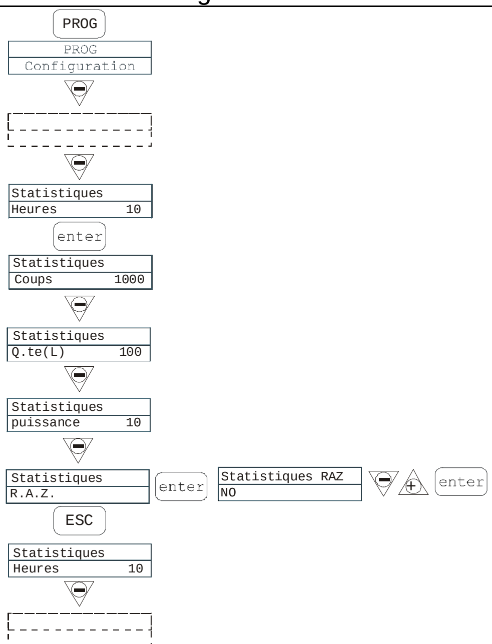
Paragraphe 10 – Programmation du relais d'alarme

Programmation	Fonctionnement
	En l'absence d'une situation d'alarme, il peut être programmé ouvert (usine) ou fermé. Appuyer sur [mode enter] pour accéder à la modification puis avec les touches [+] [−] programmer la valeur. Avec [mode enter] confirmer et retourner au menu principal.

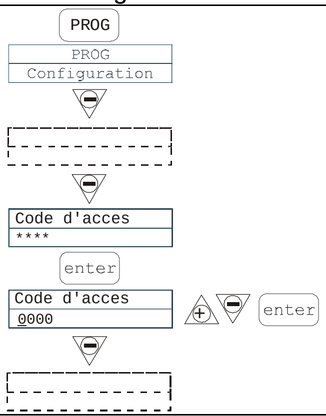
Paragraphe 11 – Calibrage du débit

Programmation	Fonctionnement
	Le menu principal affiche la valeur de cc par coup en mémoire. Il est possible de calibrer en deux modes : MANUEL – insérer manuellement la valeur en cc par coup avec les touches [+] [−] et confirmer avec [mode enter] AUTOMATIQUE – la pompe exécute 100 coups qui sont activés avec la touche [mode enter], une fois terminés, insérer la quantité aspirée par la pompe avec les touches [+] [−] et confirmer avec [mode enter]. La donnée insérée sera utilisée dans les calculs des débits

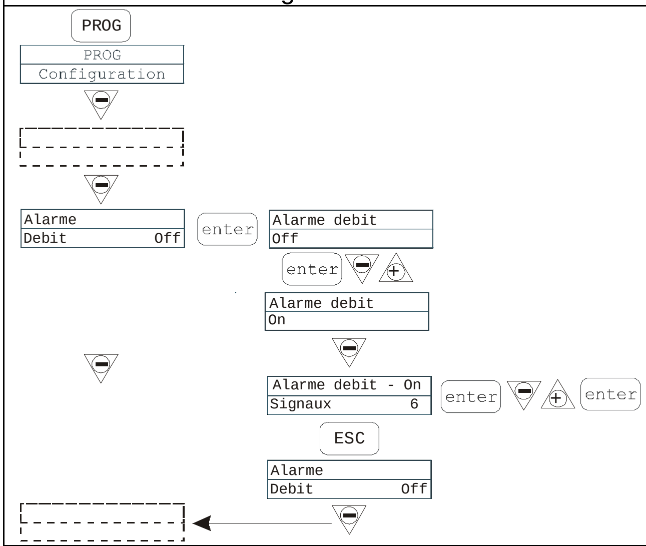
Paragraphe 12 – Statistiques

Programmation	Fonctionnement
	Le menu principal affiche les heures de fonctionnement de la pompe, appuyer sur [mode enter] pour accéder aux autres statistiques. - Strokes = nombre de coups exécutés par la pompe - Q.ty(L) = quantité dosée par la pompe exprimée en litres; cette donnée est calculée d'après la valeur cc/stroke en mémoire - Power = nombre de démarrages de la pompe - Reset = les touches [−] permettent de réinitialiser les compteurs (YES) ou non (NO), appuyer sur [mode enter] pour confirmer. La pression de [esc] permet de retourner au menu principal.

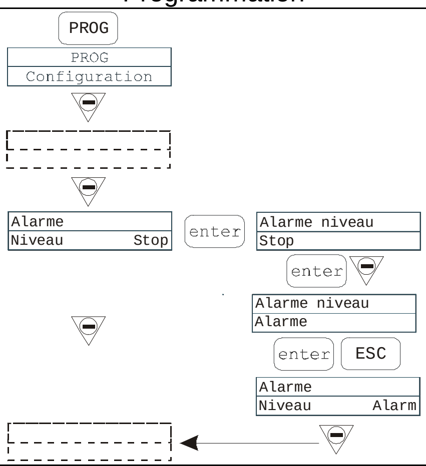
Paragraphe 13 – Password

<table>
<tr><th>Programmation</th><th>Fonctionnement</th></tr>
<tr><td>
</td><td>Entrer le mot de passe pour entrer dans la programmation et voir toutes les valeurs programmées, le mot de passe sera demandé à chaque tentative de modification
La ligne clignotante indique le nombre modifiable, avec la touche sélectionner le nombre (de 1à 9), avec la touche sélectionner le nombre à modifier puis avec la touche confirmer. En programmant “0000” (défaut), le mot de passe est exclu.</td></tr>
</table>

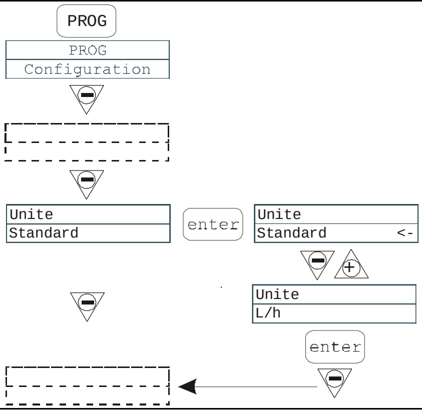
Paragraphe 14 – Alarme de flux

<table>
<tr><th>Programmation</th><th>Fonctionnement</th></tr>
<tr><td>
</td><td>Permet d’activer (Désactiver) le capteur de flux.
Une fois activé (On) appuyer sur la touche pour accéder à la demande de combien de signaux la pompe attend avant de déclencher l’état d’alarme. En appuyant sur le nombre clignote, puis avec les touches programmer la valeur. Avec confirmer. Appuyer sur pour retourner au menu principal</td></tr>
</table>

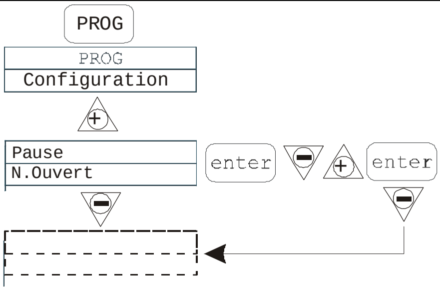
Paragraphe 15 – Alarme de niveau

<table>
<tr><th>Programmation</th><th>Fonctionnement</th></tr>
<tr><td>
</td><td>Permet de programmer la pompe lorsque l’alarme du capteur de niveau s’active, à savoir si bloquer le dosage (Stop) ou si tout simplement activer la signalisation d’alarme sans bloquer le dosage.
Appuyer sur pour accéder à la modification. Puis avec les touches programmer le type d’alarme. Avec confirmer. Appuyer sur pour retourner au menu principal.</td></tr>
</table>

Paragraphe 16 – Unité affichage débit

Programmation	Fonctionnement
	Permet de programmer l'unité de mesure du dosage sur l'afficheur. Appuyer sur mode enter pour accéder à la modification, puis appuyer sur ⊕ ⊖ pour programmer le type d'unité de mesure, L/h (Litres/heure), Gph (Gallons/heure), ml/m (millilitres/minute) ou standard (% ou fréquence selon la programmation), Appuyer sur mode enter pour confirmer et retourner au menu principal

Paragraphe 17 - Programmation Pause

Programmation	Fonctionnement
	Entrée signal pour mettre la pompe en pause. Le système est réglé d'usine en Normalement Ouvert. Appuyer sur mode enter pour accéder à la modification puis avec les touches ⊕ ⊖ programmer la valeur (N. OUVERT ou N. FERME'). Avec mode enter confirmer et retourner au menu principal.

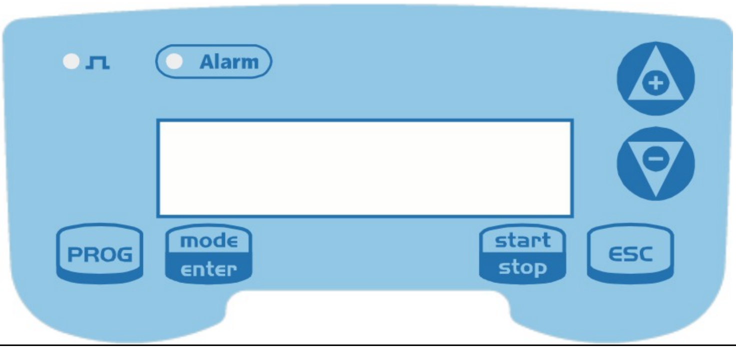
Régulation contraste affichage

Pour la régulation du contraste de l'affichage tenir appuyée la touche ESC et dans 5 secondes appuyer sur les touches ⊕ ou ⊖ pour augmenter ou diminuer le contraste.

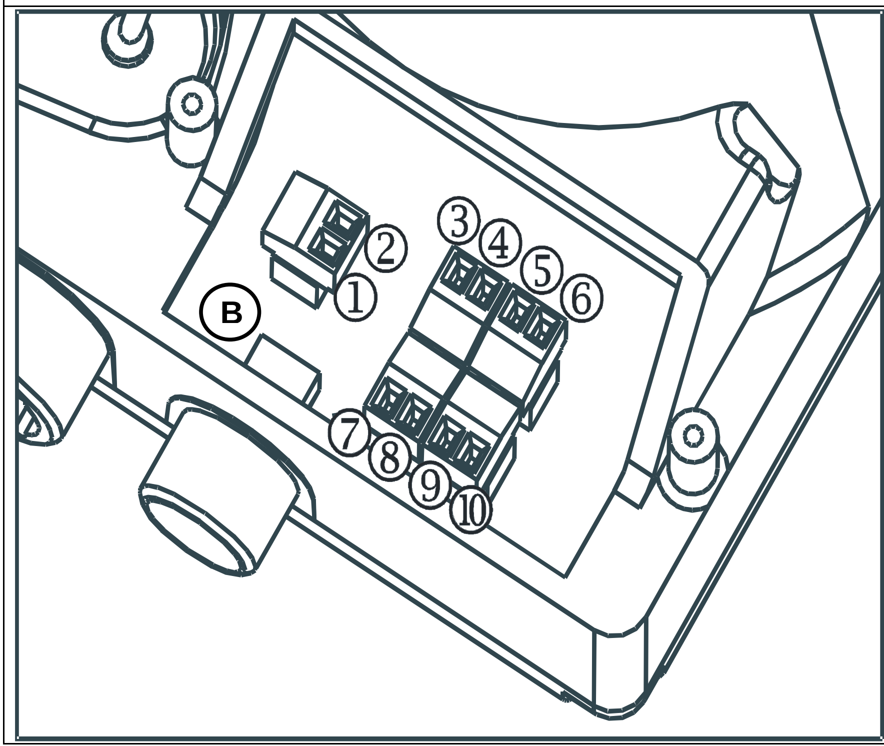
Alarmes

Affichage	Cause	Interruption
Led Alarme fixe Message lev clignotant Ex: `Man` / `Lev P100%`	Alarme fin de niveau, sans interruption du fonctionnement de la pompe	Rétablissement du niveau du liquide
Led Alarme fixe Message lev et stop clignotant Ex: `Man` / `Lev Stop P100%`	Alarme fin de niveau, avec interruption du fonctionnement de la pompe	Rétablissement du niveau du liquide
Message Mem clignotant Ex: `1:n 6` / `Mem`	La pompe reçoit une ou plusieurs impulsions durant le dosage avec la fonction Mémoire sur Off	Pression de la touche start stop
Message Mem clignotant Ex: `1:n M 6` / `Mem`	La pompe reçoit une ou plusieurs impulsions durant le dosage avec la fonction Mémoire sur On	Lorsque la pompe cesse de recevoir les impulsions extérieures, elle rend les coups mémorisés.
Led Alarme fixe Message Flw clignotant Ex: `Man F` / `Flw P100%`	Alarme de flux active, la pompe n'a pas reçu le nombre de signaux programmés par le capteur de flux.	Pression de la touche start stop
Ex: `Parameter Error` / `PROG to default`	Erreur de communication interne de l'UC.	Pression de la touche PROG pour rétablir les paramètres de défaut.

Pannello di controllo – TEKNA TPG



	Accesso al menu di programmazione.
	Durante la fase di funzionamento della pompa: premuto visualizza ciclicamente sul display i valori programmati; Premuto contemporaneamente ai pulsanti   aumenta o decrementa un valore dipendente dalla modalità di funzionamento prescelta. In programmazione svolge la funzione “enter”, cioè conferma l’ingresso nei vari livelli di menu e le modifiche all’interno degli stessi.
	Avvia e mette in fase di stop la pompa. Nelle condizioni di allarme di livello (sola funzione allarme), di flusso e memory attive, disattiva la segnalazione sul display.
	Per “uscire” dai vari livelli di menu. Prima di uscire definitivamente dalla programmazione si accede alla richiesta di salvataggio delle modifiche.
	Scorre i menu verso l’alto, oppure incrementa i valori numerici da modificare. Nella modalità Batch può avviare il dosaggio.
	Scorre i menu verso il basso, oppure decrementa i valori numerici da modificare.
	Led verde lampeggiante durante il dosaggio.
	Led rosso che si accende nelle varie situazioni d’allarme.

<table>
<tr><th colspan="4">Connessioni elettriche</th></tr>
<tr><td rowspan="11"></td><td>1</td><td colspan="2" rowspan="2">Relè d’allarme</td></tr>
<tr><td>2</td></tr>
<tr><td>3</td><td>Polo +</td><td rowspan="2">Ingresso 4-20 mA
Impedenza d’ingresso: 200 ohm</td></tr>
<tr><td>4</td><td>Polo –</td></tr>
<tr><td>5</td><td colspan="2" rowspan="2">-Ingresso controllo remoto (start-stop)
-Ingresso segnale Pausa</td></tr>
<tr><td>6</td></tr>
<tr><td>7</td><td colspan="2" rowspan="2">-Ingressi segnale in frequenza (contatore lancia-impulsi)
-Ingresso trigger esterno</td></tr>
<tr><td>8</td></tr>
<tr><td>9</td><td colspan="2" rowspan="2">Ingressi sensore di flusso</td></tr>
<tr><td>10</td></tr>
<tr><td>B</td><td colspan="2">Ingresso sonda controllo livello</td></tr>
</table>

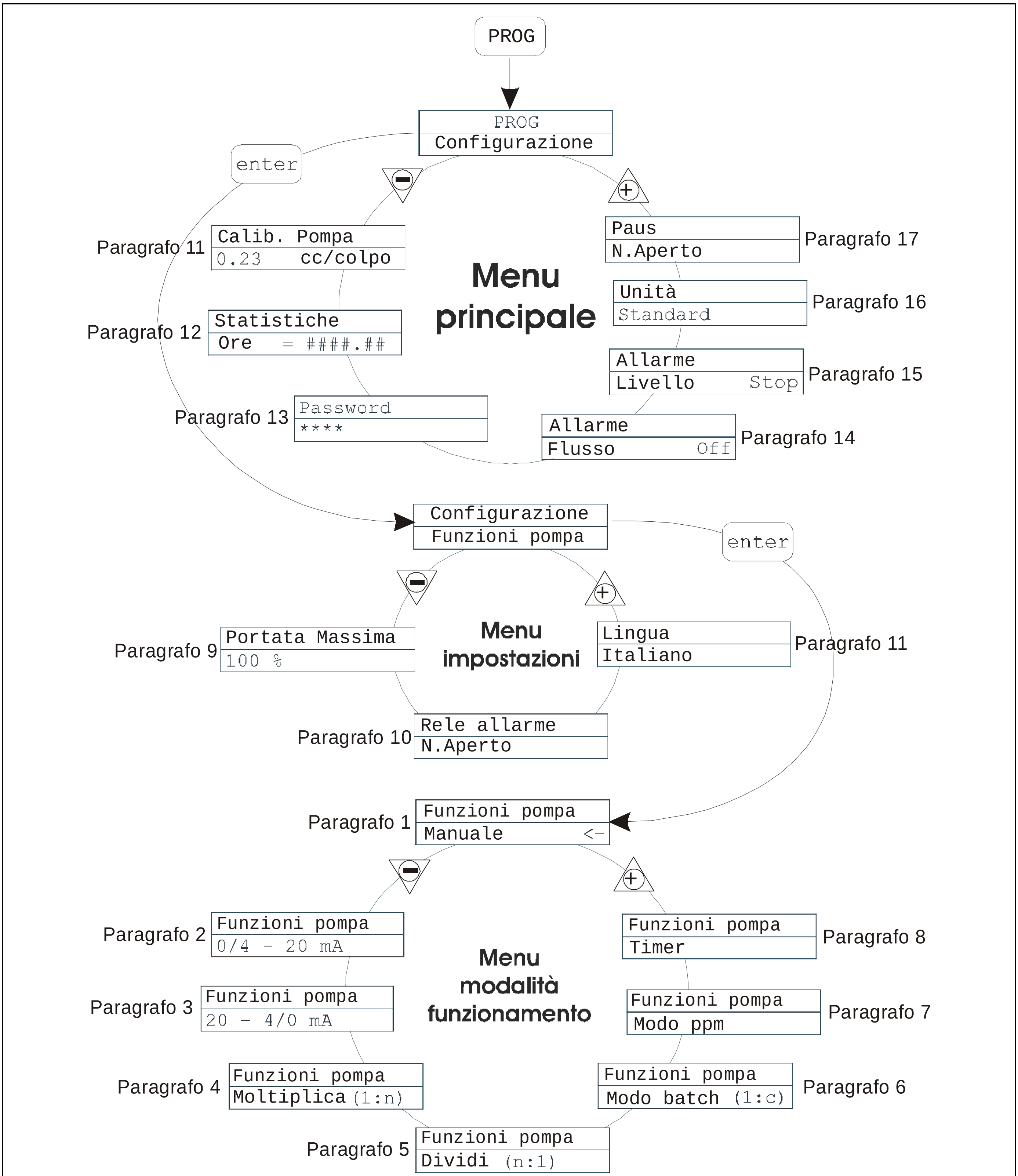
Menu di Programmazione Tekna TPG

Premendo il tasto PROG per più di tre secondi si accede alla programmazione. Con i tasti ⊕ ⊖ potrete scorrere le voci del menu, con il pulsante mode enter si accede alle modifiche.

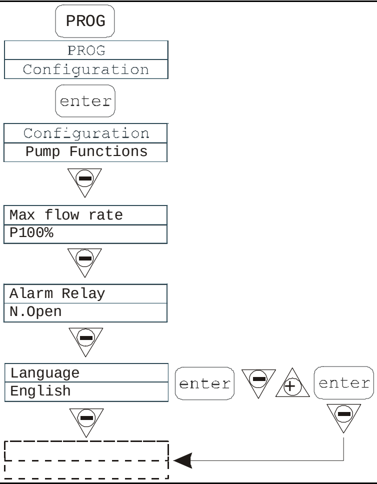
Di fabbrica la pompa è programmata in modalità costante. La pompa torna automaticamente nella modalità di funzionamento dopo 1 minuto di non attività. I questo caso dati eventualmente inseriti non vengono salvati.

Con il pulsante ESC si esce dai livelli della programmazione. All'uscita dalla programmazione il display visualizza:

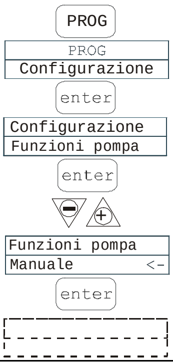
Exit	∇ Δ	Exit	
No Save		Save	mode enter per confermare la scelta

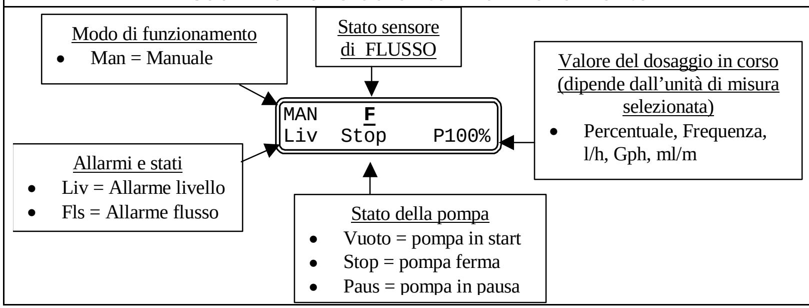
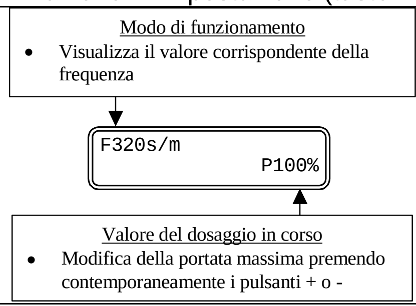


Impostazione lingua

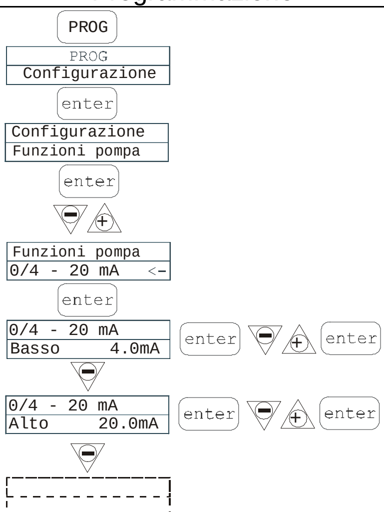
Programmazione	Funzionamento
	Permette di selezionare la lingua, di fabbrica la pompa è impostata in inglese. Premendo mode enter si accede alla modifica, quindi con i tasti imposto il valore. Con mode enter confermo e torno al menu principale

Paragrafo 1 –Dosaggio manuale

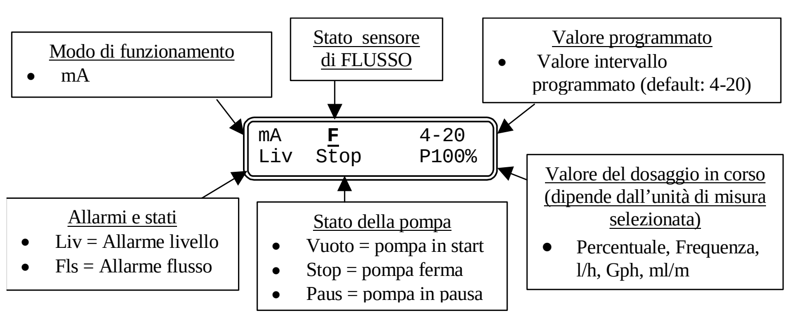
Programmazione	Funzionamento
	La pompa lavora in modalità costante. La portata è regolata manualmente premendo contemporaneamente i pulsanti mode enter per aumentare il valore della portata, oppure i pulsanti mode enter per diminuirlo.

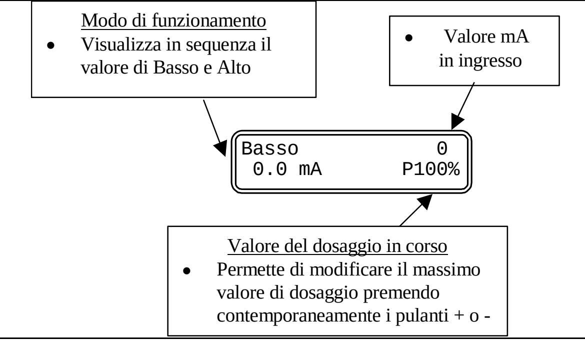
Visualizzazione durante il funzionamento	Visualizzazione in impostazione (tasto MODE)
	

Paragrafo 2 – Dosaggio Proporzionale a segnale 0/4-20 mA

Programmazione	Funzionamento
	La pompa dosa proporzionalmente ad un segnale (0)4-20 mA. Di fabbrica la pompa interrompe il dosaggio a 4 mA e dosa alla massima frequenza impostata quando riceve 20 mA. In programmazione è possibile modificare questi due valori. La frequenza massima è modificabile durante il funzionamento, premendo contemporaneamente i tasti mode enter per aumentare la portata, oppure i pulsanti mode enter per diminuirla.

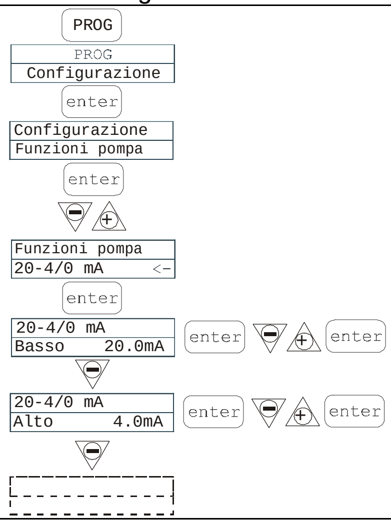
Visualizzazione durante il funzionamento	Visualizzazione in impostazione (tasto MODE)





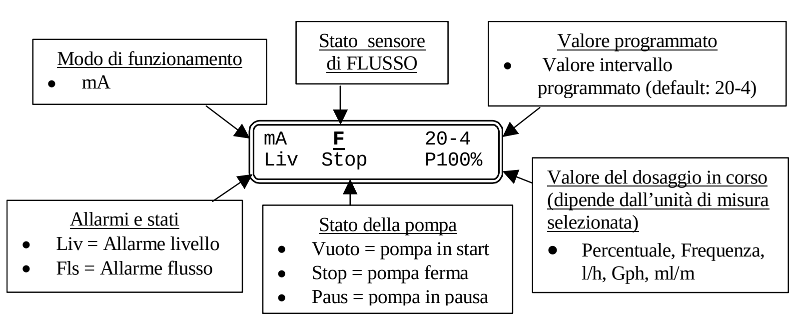
Paragrafo 3 – Dosaggio Proporzionale a segnale 20-4/0 mA

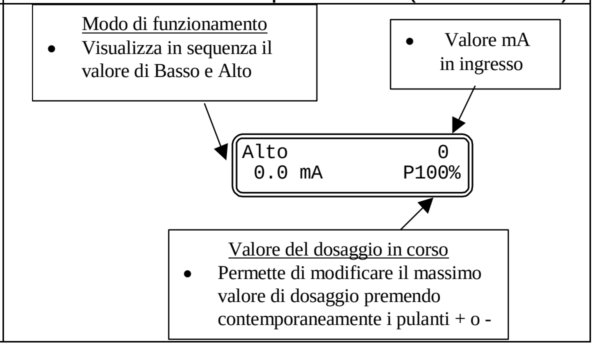
Programmazione	Funzionamento



La pompa dosa proporzionalmente ad un segnale 20-4(0) mA. Di fabbrica la pompa interrompe il dosaggio a 20 mA e dosa alla massima frequenza impostata quando riceve 4 mA. In programmazione è possibile modificare questi due valori. La frequenza massima è modificabile durante la fase di funzionamento premendo contemporaneamente i tasti per aumentare la portata, oppure i pulsanti per diminuirla.

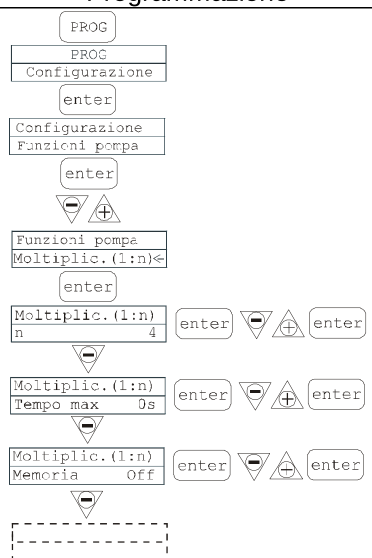
Visualizzazione durante il funzionamento	Visualizzazione in impostazione (tasto MODE)



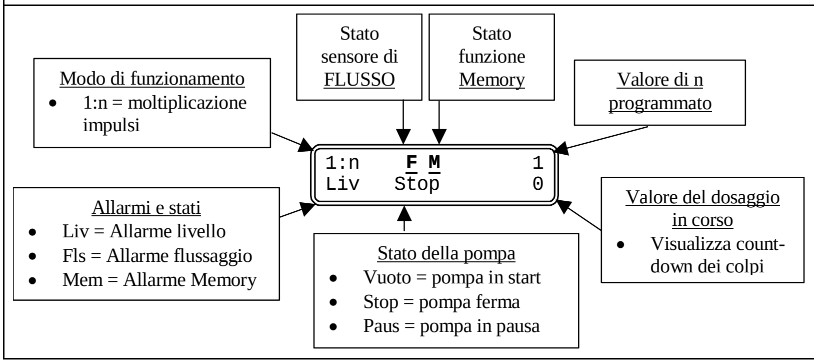
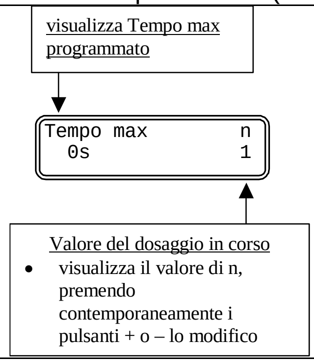


Paragrafo 4 – Proporzionale ad impulsi esterni (moltiplicazione)

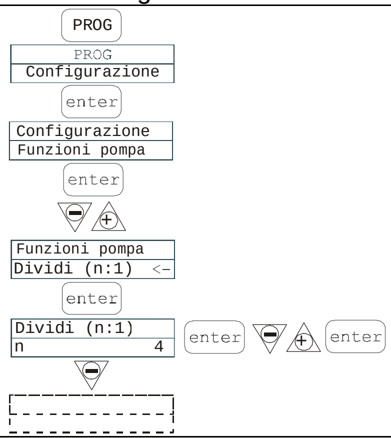
Programmazione	Funzionamento

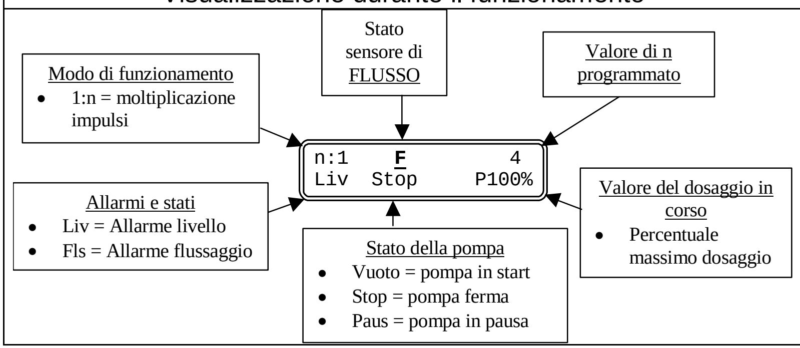
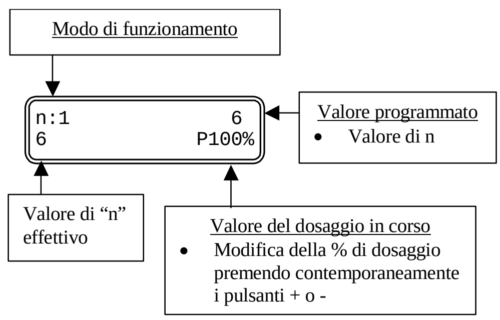


La pompa dosa proporzionalmente ad un segnale esterno (es.: contatore lanciaimpulsi). Ad ogni segnale ricevuto la pompa effettua gli "n" colpi programmati. La pompa imposta automaticamente la frequenza di dosaggio, adattandola al tempo che intercorre fra due segnali successivi. È possibile programmare in secondi il tempo (timeout) oltre il quale la pompa azzera il conteggio dell'intervallo, per evitare dosaggi in tempi troppo lunghi. La pompa dispone della funzione memory, che segnala il ricevimento di un segnale durante il dosaggio. Se impostata in Off si limita a segnalare, se in On segnala e memorizza gli impulsi, quindi li esegue quando smette di ricevere segnali.
Il valore di "n" è modificabile durante la fase di funzionamento premendo contemporaneamente i tasti per incrementare il valore della portata, oppure i pulsanti per decrementarlo.

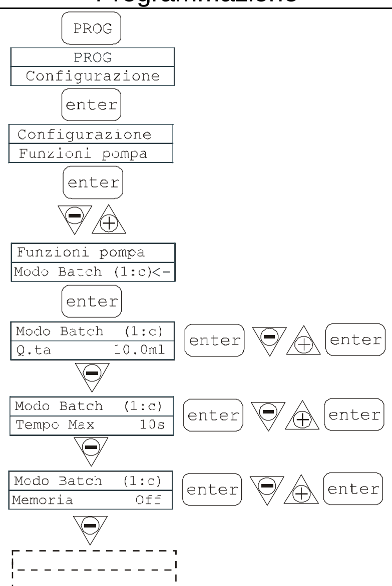
Visualizzazione durante il funzionamento	Visualizzazione in impostazione (tasto MODE)
	

Paragrafo 5 – Proporzionale ad impulsi esterni (divisione)

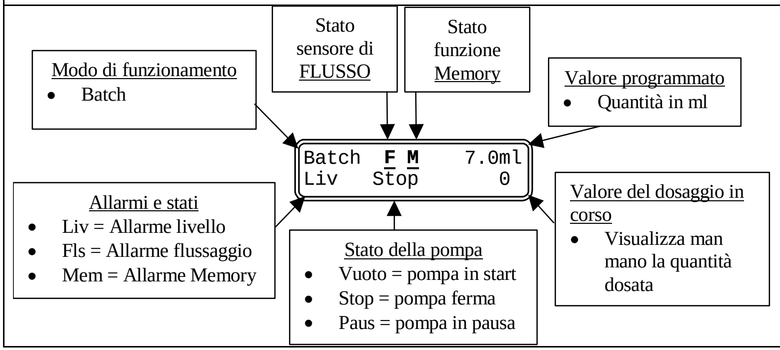
Programmazione	Funzionamento
	La pompa dosa proporzionalmente ad un segnale esterno (es.: contatore lanciaimpulsi). Ad ogni "n" segnali ricevuti la pompa effettua un colpo. In programmazione imposto il valore di "n". Programmando il valore di "n" si imposta la % di dosaggio massima, durante la fase di funzionamento posso modificare questo valore premendo contemporaneamente i tasti mode enter (+) per aumentarlo, oppure i pulsanti mode enter (−) per diminuirlo.

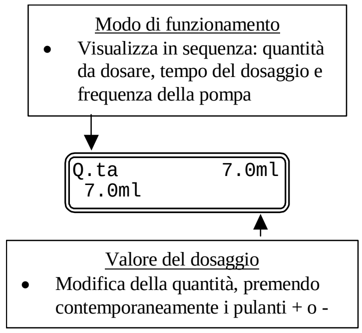
Visualizzazione durante il funzionamento	Visualizzazione in impostazione (tasto MODE)
	

Paragrafo 6 – Proporzionale ad impulsi esterni (dosaggio batch)

Programmazione	Funzionamento
	La pompa dosa proporzionalmente ad un segnale esterno (es.: contatore lanciaimpulsi). In questo caso posso programmare la quantità da dosare in ml ed il tempo entro il quale completare il dosaggio. È possibile avviare il dosaggio manualmente tramite la pressione del pulsante (+), oppure tramite un comando remoto. Il pulsante start stop, interrompe il dosaggio, che può essere azzerato premendo il tasto (+), oppure riavviato premendo nuovamente start stop. La quantità da dosare è modificabile durante la fase di funzionamento premendo contemporaneamente i tasti mode enter (+) per aumentare la portata, oppure i pulsanti mode enter (−) per diminuirla.

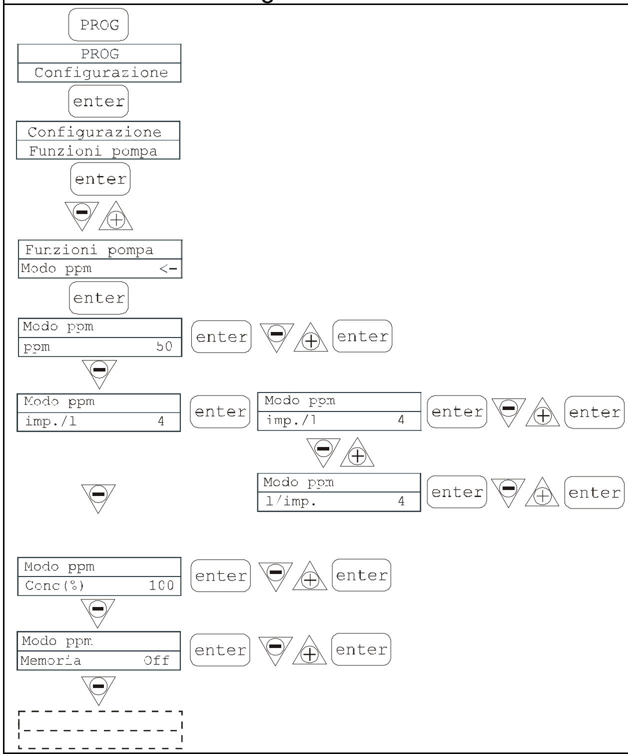
Visualizzazione durante il funzionamento	Visualizzazione in impostazione (tasto MODE)





Paragrafo 7 – Proporzionale ad impulsi esterni (dosaggio in ppm)

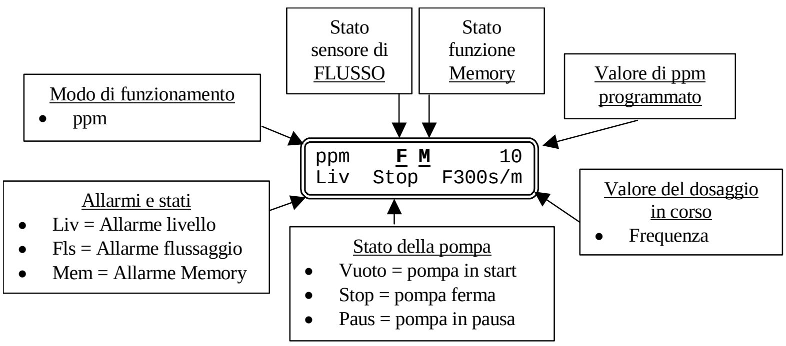
Programmazione

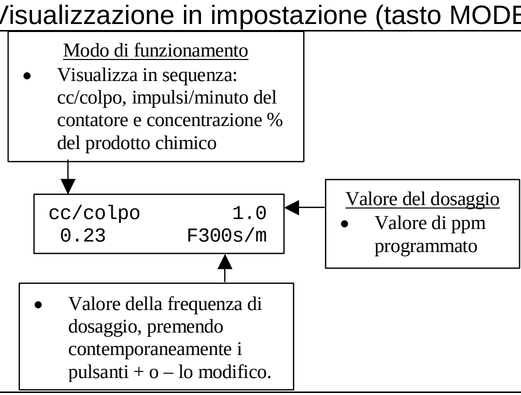


Funzionamento

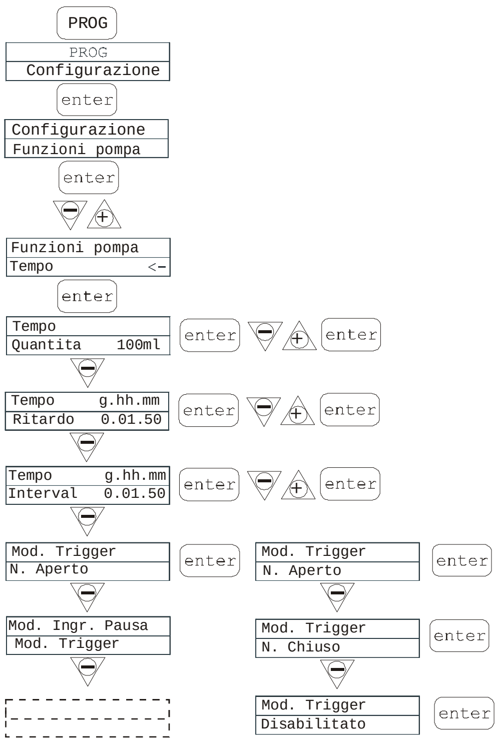
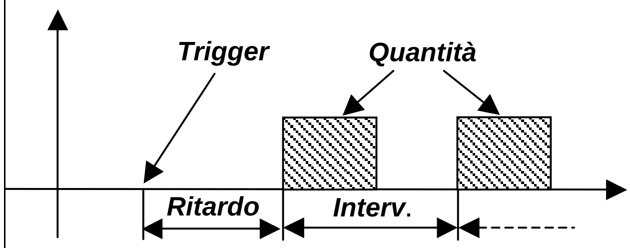
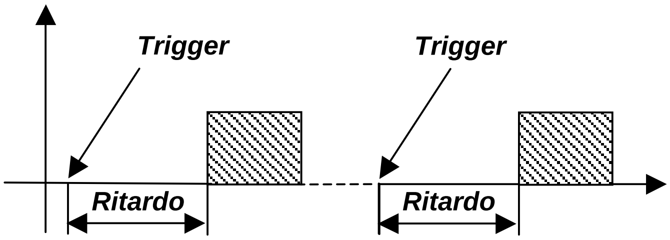
La pompa dosa proporzionalmente ad un segnale esterno (es.: contatore lanciaimpulsi) calcolando automaticamente il rapporto tra segnali in ingresso e colpi della pompa in funzione del valore di ppm programmato.
I dati da inserire sono il valore di ppm, il rapporto impulsi/litro (oppure litri/impulso) del contatore e la concentrazione del prodotto da dosare.
Durante la fase di funzionamento posso modificare la frequenza di dosaggio, premendo contemporaneamente i tasti   per aumentarla, oppure i pulsanti   per diminuirla.

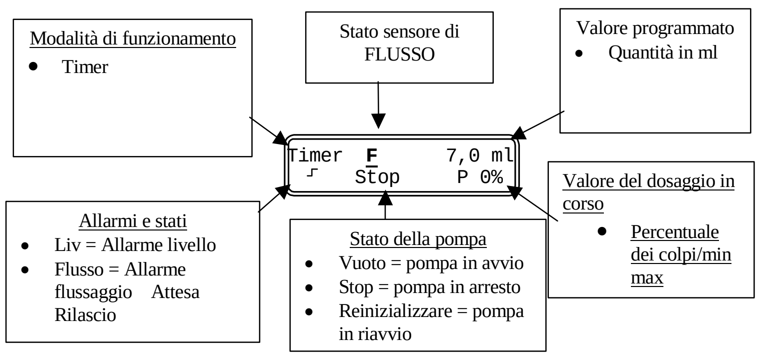
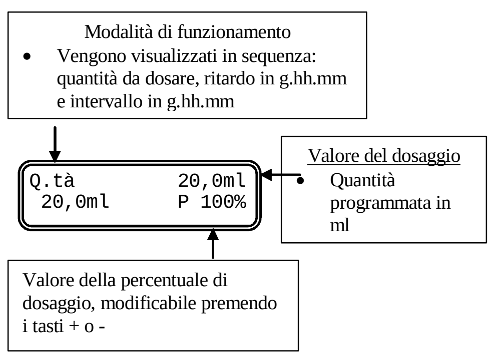
Visualizzazione durante il funzionamento	Visualizzazione in impostazione (tasto MODE)





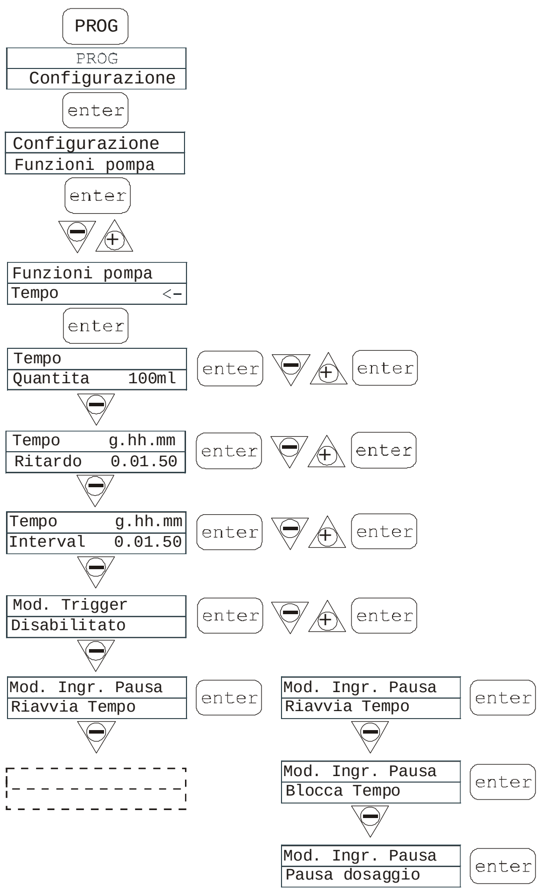
Paragrafo 8 – Dosaggio temporizzato (***Ingresso segnale frequenza* “*TRIGGER” attivato)**)

Programmazione	Funzionamento
	Dopo la ricezione del segnale di ***Trigger*** impostato, la pompa dosa una quantità programmabile in ml. È possibile impostare un tempo di ritardo prima del dosaggio (***Ritardo***) e la distanza tra dosaggi successivi (***Interv***al.) come illustrato nello schema:  Impostando, ad esempio, un tempo ***Interv***.= 0 si ottiene un sistema nel quale la quantità programmata viene dosata dopo ogni segnale di ***TRIGGER*** (con l’eventuale ritardo impostato):  È possibile avviare il dosaggio anche premendo il tasto +, il quale praticamente simula il segnale di ***Trigger***. Il segnale ***Trigger*** può essere impostato su ***N. Aperto*** (si attiva quando l’ingresso passa dalla modalità aperta a quella chiusa) o su ***N. Chiuso*** (si attiva quando l’ingresso passa dalla modalità chiusa a quella aperta). Il segnale ***Trigger*** è bloccato durante il dosaggio (la sua ricezione non viene né memorizzata né gestita). L’ingresso ***Pausa*** (***Ingresso telecomando***) non può essere programmato e la sua attivazione blocca il dosaggio, mentre la successiva disattivazione rimette il sistema in attesa del segnale ***Trigger*** per un nuovo dosaggio. Durante la fase di funzionamento della pompa, è possibile modificare la frequenza di dosaggio premendo contemporaneamente i tasti mode/enter e + per aumentare la frequenza oppure i tasti mode/enter e - per diminuirla.

Visualizzazione durante il funzionamento	Visualizzazione all’avvio (tasto MODE)
	

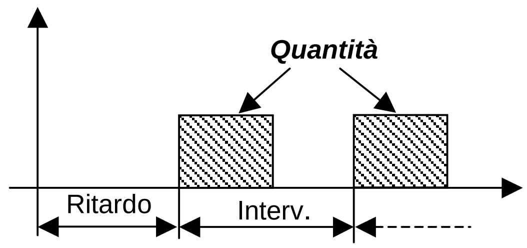
Paragrafo 8 – Dosaggio temporizzato (***Ingresso segnale frequenza* "*TRIGGER" non attivato)***

Programmazione



Funzionamento

La pompa dosa una quantità programmabile in ml, è possibile impostare un tempo di ritardo all'avvio della pompa (***Ritardo***) e la distanza tra due dosaggi successivi (***Interval.***) come illustrato nello schema:

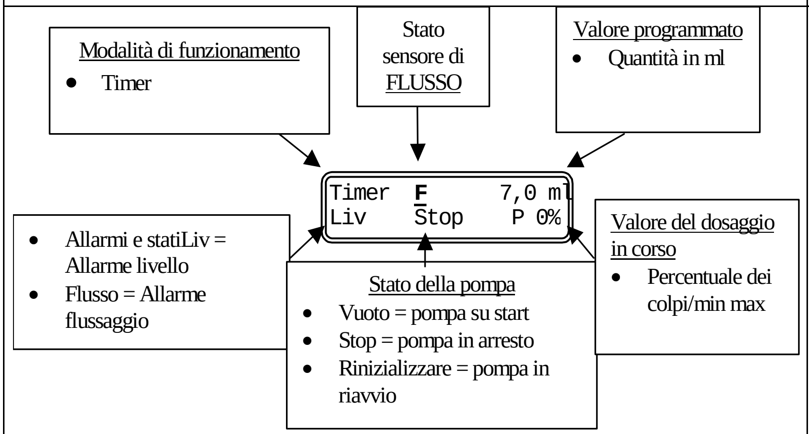
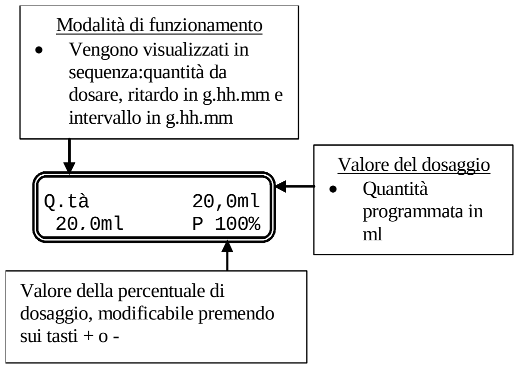


I tempi di ***Ritardo*** e di ***Interv***. sono in gg.hh.mm (giorni.ore.minuti)

L'ingresso della ***Pausa*** può essere programmato in tre modalità diverse:

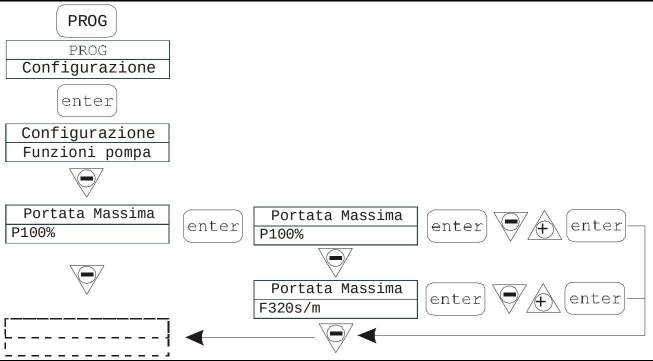
1. ***Blocca Tempo***: con la pausa attivata, il sistema blocca il conteggio del tempo attuale e lo riprende quando la pausa si disattiva
2. ***Pausa dosaggio***: con la pausa attivata, il sistema continua a contare il tempo e blocca il dosaggio
3. ***Riavvia Tempo***: con la pausa attivata, il sistema blocca il dosaggio e quando la pausa si disattiva il conteggio ricomincia dall'inizio.

Durante la fase di funzionamento della pompa, è possibile modificare la frequenza di dosaggio premendo contemporaneamente i tasti mode/enter e + per aumentare la frequenza oppure i tasti mode/enter e – per diminuirla.

Visualizzazione durante il funzionamento	Visualizzazione all'avvio (tasto MODE)
	

Paragrafo 9 – Impostazione massima portata

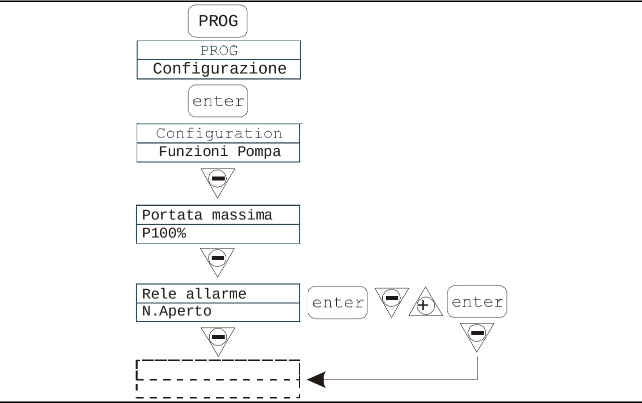
Programmazione



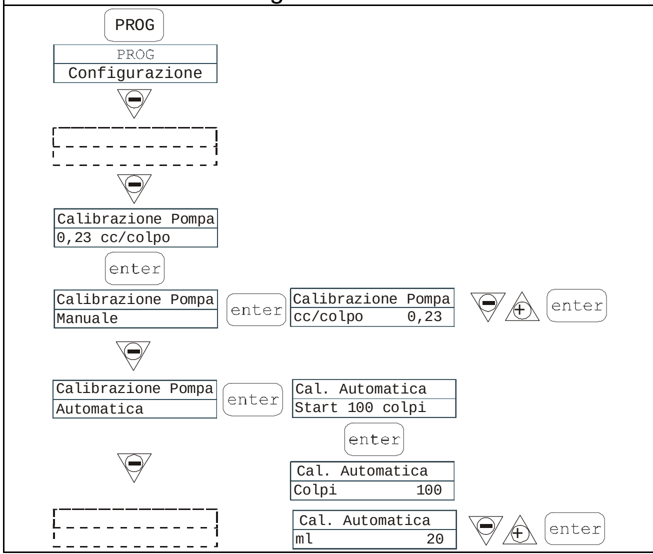
Funzionamento

Permette di impostare la massima portata raggiungibile dalla pompa e la modalità programmata (% o frequenza) diventa la visualizzazione della portata nell'unità di misura standard. Premendo mode/enter si accede alla modifica, quindi con i tasti + – imposto il valore. Con mode/enter confermo e torno al menu principale

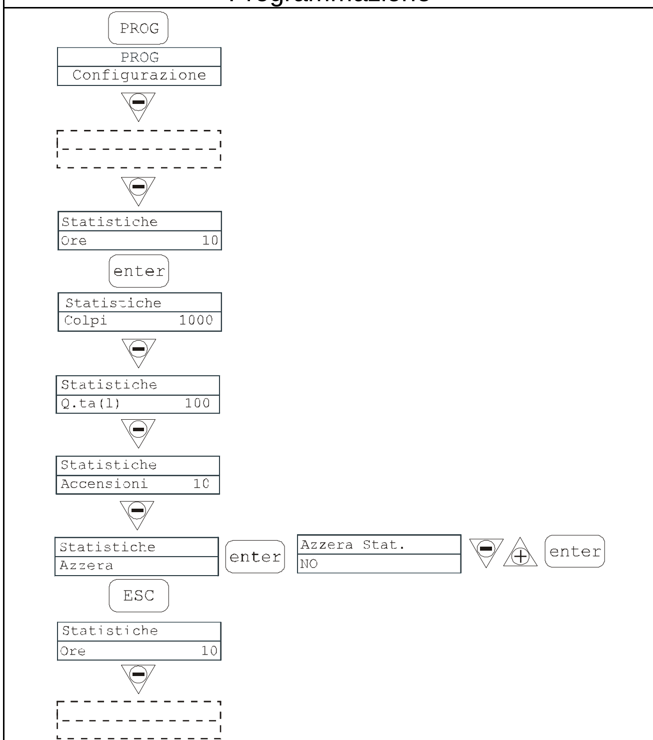
Paragrafo 10 – Impostazione relé d'allarme

Programmazione	Funzionamento
	In assenza di situazione d'allarme può essere impostato aperto (fabbrica) oppure chiuso. Premendo si accede alla modifica, quindi con i tasti imposto il valore. Con confermo e torno al menu principale

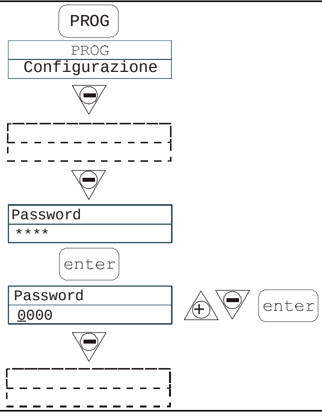
Paragrafo 11 – Calibrazione portata

Programmazione	Funzionamento
	Nel menu principale appare il valore di cc a colpo in memoria. È possibile calibrare in due modalità: MANUALE – inserisco manualmente il valore di cc a colpo con i tasti e confermo con AUTOMATICA – la pompa esegue 100 colpi, che vengono avviati con il tasto e confermo con , alla fine dei quali inserisco la quantità aspirata dalla pompa con i tasti e confermo con . Il dato inserito verrà utilizzato nei calcoli delle portate.

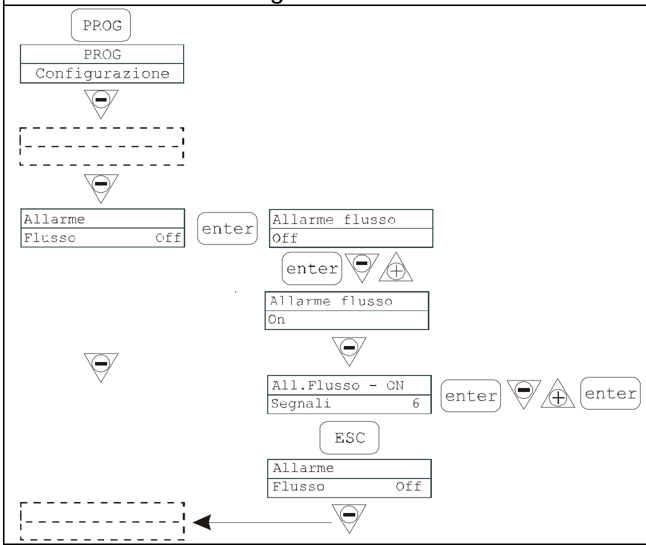
Paragrafo 12 – Statistiche

Programmazione	Funzionamento
	Nel menu principale visualizza le ore di funzionamento della pompa, premendo il tasto accedo alle altre statistiche: - Strokes = numero di colpi eseguito dalla pompa - Q.ty(L) = quantità dosata dalla pompa espressa in litri; questo dato viene calcolato in base al valore cc/stroke in memoria - Power = numero di avviamenti della pompa - Reset = i tasti decido se azzerare i contatori (YES) oppure no (NO), con confermo. La pressione di permette di tornare al menu principale.

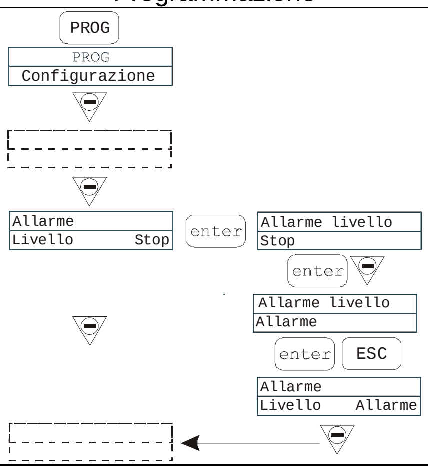
Paragrafo 13 – Password

<table>
<tr><th>Programmazione</th><th>Funzionamento</th></tr>
<tr><td>
</td><td>Inserendo la password, potrò entrare in programmazione e vedere tutti i valori impostati, ma ogni volta che cercherò di modificarli verrà richiesta la password.
La linea lampeggiante indica il numero modificabile, con il tasto seleziono il numero (da 1 a 9), con il tasto seleziono il numero da modificare, quindi con confermo. Impostando “0000” (fabbrica), la password viene esclusa.</td></tr>
</table>

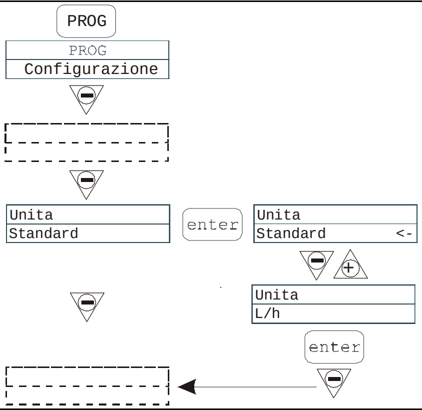
Paragrafo 14 – Allarme di flusso

<table>
<tr><th>Programmazione</th><th>Funzionamento</th></tr>
<tr><td>
</td><td>Permette di attivare (disattivare) il sensore di flusso.
Una volta attivato (On) premendoli tasto si accede alla richiesta di quanti segnali aspetta la pompa prima di andare in allarme. Premendo lampeggia il numero, quindi con i tasti imposto il valore. Con confermo. Premendo torno al menu principale</td></tr>
</table>

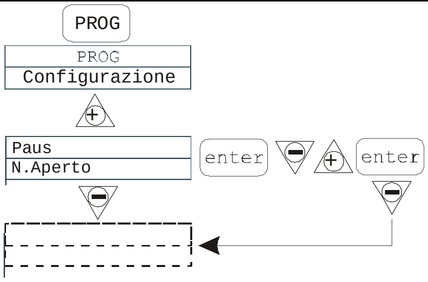
Paragrafo 15 – Allarme di livello

<table>
<tr><th>Programmazione</th><th>Funzionamento</th></tr>
<tr><td>
</td><td>Permette di impostare la pompa quando si attiva l’allarme del sensore di livello, cioè se bloccare il dosaggio (Stop), oppure se semplicemente attivare la segnalazione d’allarme senza bloccare il dosaggio.
Premendo si accede alla modifica, quindi con i tasti imposto il tipo di allarme. Con confermo.
Premendo torno al menu principale</td></tr>
</table>

Paragrafo 16 – Unità visualizzazione portata

Programmazione	Funzionamento
	Permette di impostare l'unità di misura del dosaggio a display in visualizzazione. Premendo mode enter si accede alla modifica, quindi con i tasti ⊕ ⊖ imposto il tipo di unità di misura, L/h (Litri/ora), Gph (Galloni/ora), ml/m (millilitri/minuto) o standard (% o frequenza, a seconda di come impostato). Con mode enter confermo e torno al menu principale

Paragrafo 17 –Impostazione Pausa

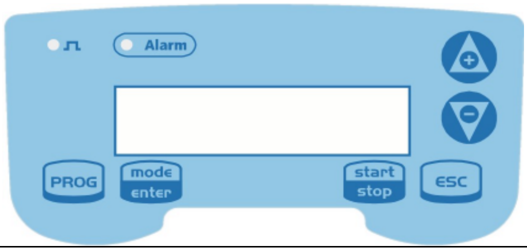
Programmazione	Funzionamento
	Ingresso remoto per mettere in pausa la pompa. In fabbrica il sistema è impostato come Normalmente Aperto. Premendo mode enter si accede alla modifica, quindi con i tasti ⊕ ⊖ imposto il valore (N. APERTO oppure N. CHIUSO) Con mode enter confermo e torno al menu principale.

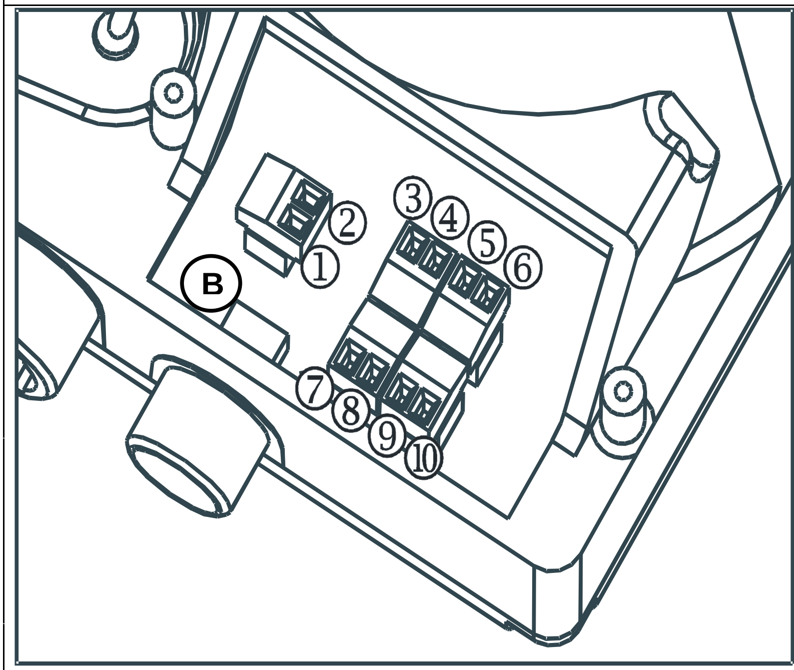
Regolazione contrasto display

Per la regolazione del contrasto del display tenere premuto il tasto ESC e entro 5 secondi premere i tasti ⊕ o ⊖ per incrementare o meno il contrasto.

Allarmi

Visualizzazione	**Causa**	**Interruzione**
Led Alarm fisso Scritta lev lampeggiante Es: `Man` `Lev P100%`	Allarme fine di livello, senza interruzione del funzionamento della pompa	Ripristino del livello del liquido.
Led Alarm fisso Scritta lev e stop lampeggiante Es: `Man` `Lev Stop P100%`	Allarme fine di livello, con interruzione del funzionamento della pompa	Ripristino del livello del liquido
Scritta Mem lampeggiante Es: `1:n 6` `Mem`	La pompa riceve uno o più impulsi durante il dosaggio con funzione memory in Off	Pressione del tasto start stop
Scritta Mem lampeggiante Es: `1:n M 6` `Mem`	La pompa riceve uno o più impulsi durante il dosaggio con funzione memory in On	Quando la pompa finisce di ricevere gli impulsi esterni restituisce i colpi memorizzati
Led Alarm fisso Scritta Flw lampeggiante Es: `Man F` `Flw P100%`	Allarme di flusso attivo, la pompa non ha ricevuto il numero di segnali programmati dal sensore di flusso.	Pressione del tasto start stop
Es: `Parameter Error` `PROG to default`	Errore di comunicazione interna della CPU.	Pressione del tasto PROG per ripristinare i parametri di default.

Painel de Controle - TEKNA TPG	
	
	Acesso ao menu de programação
	Durante a fase de funcionamento da bomba: acionado visualiza ciclicamente no display os valores programados; Acionando simultaneamente às teclas   aumenta ou reduz um valor dependente da modalidade de funcionamento pré-escolhida. Na programação desenvolve a função “enter”, isto é, confirma a entrada nos vários níveis de menu e as modificações no interior dos mesmos.
	Liga ou desliga a bomba. Nas condições de alarme de nível (só função alarme), de fluxo e memory ativas, desativa a sinalazação no display.
	Para “sair” dos vários níveis de menu. Antes de sair definitivamente da programação se acessa a requisição de salvar modificações.
	Percorre os menus para cima, ou ainda, aumenta os valores numéricos a modificar. Na modalidade Batch pode iniciar a dosagem.
	Percorre os menús para baixo, ou ainda, reduz os valores numéricos a modificar.
	Led verde lampejante durante a dosagem.
	Led vermelho que ascende nas varias situações de alarme.

Conexões Elétricas			
	1	Relê de alarme	
	2		
	3	Polo +	Entrada 4-20 mA Impedância de entrada: 200 ohm
	4	Polo –	
	5	-Entrada do controle remoto (start-stop) -Entradas Pausa sinal	
	6		
	7	-Entradas de sinal em frequência (contador lança-impulsos) -Entradas Trigger sinal	
	8		
	9	Entradas do sensor de fluxo	
	10		
	B	Entrada da sonda de controle de nível	

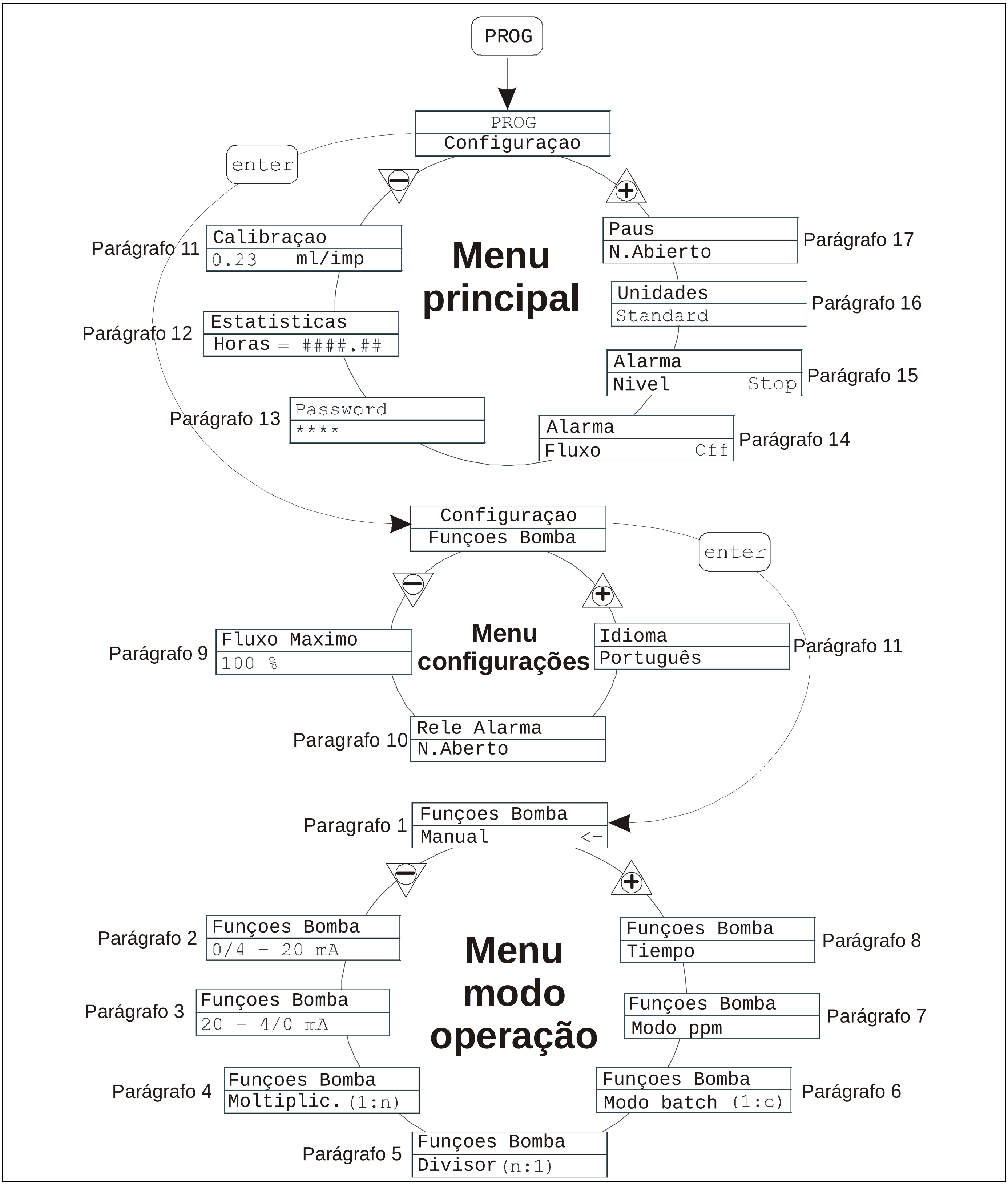
Menu de Programação Tekna TPG

Acionando a tecla PROG por mais de três segundos se acessa a programação. Com as teclas ⊕ ⊖ é possível percorrer os itens do menu, com a tecla mode enter se acessam as modificações.
De fábrica a bomba vem programada na modalidade constante. A bomba volta automaticamente na modalidade de funcionamento depois de 1 minuto de inatividade. Neste caso dados eventualmente inseridos não serão salvos.

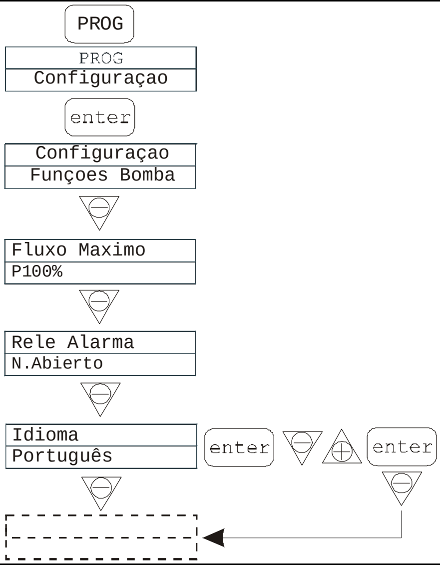
Com a tecla ESC se sai dos níveis da programação. Na saida da programação o display mostra:

Saída	∇ Δ	Saída
Não Salva		Salva

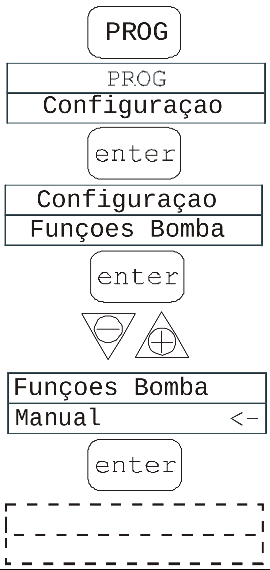
mode enter para confirmar a escolha

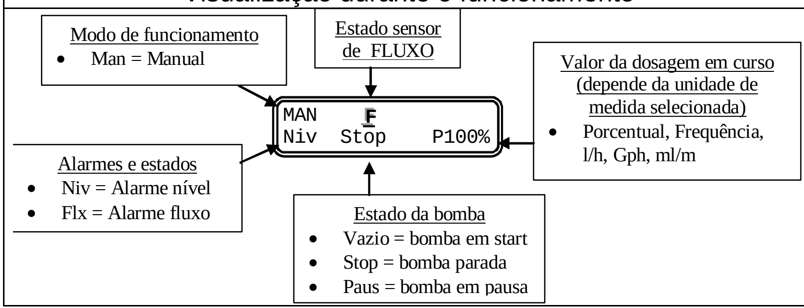
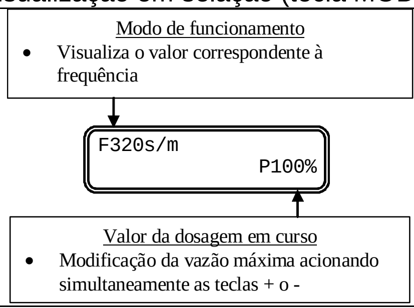


Seleção do Idioma

Programação	Funcionamento
	Permite selecionar o idioma, de fábrica a bomba vem programada em inglês. Acionando [mode enter] se acessa a modificação, a seguir, com as teclas [+] [−] seleciono o valor. Com [mode enter] confirmo e volto ao menu principal

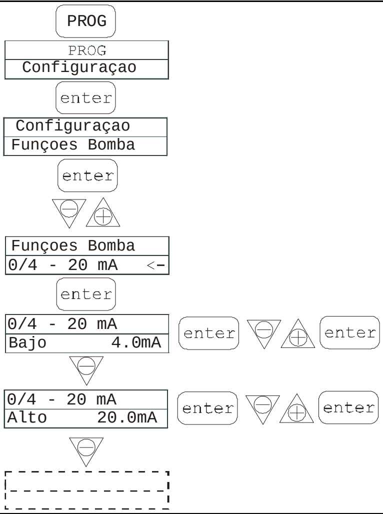
Parágrafo 1 - Dosagem Manual

Programação	Funcionamento
	A bomba trabalha na modalidade constante. A vazão é controlada e manualmente acionando simultaneamente as teclas [mode enter] [+] para aumentar o valor da vazão, ou ainda as teclas [mode enter] [−] para diminuí-lo.

Visualização durante o funcionamento	Visualização em selação (tecla MODE)
	

Parágrafo 2 - Dosagem Proporcional a Sinal 0/4-20 mA

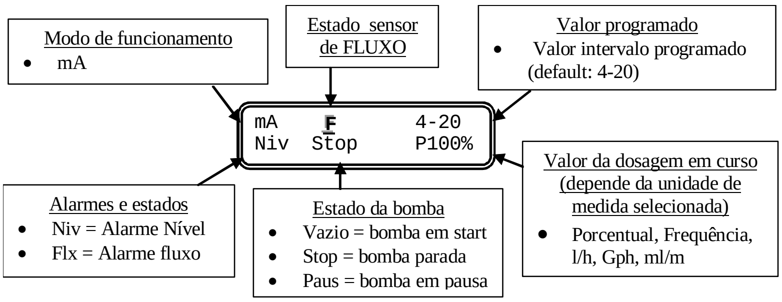
Programação



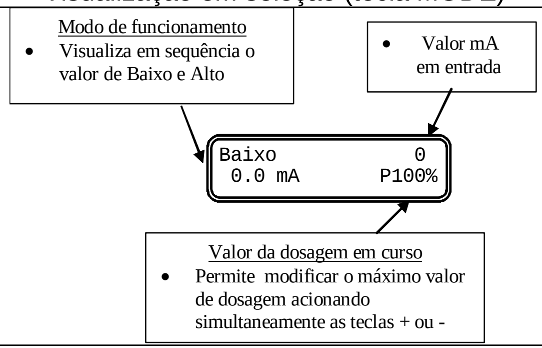
Funcionamento

A bomba dosa proporcionalmente a um sinal (0)4-20 mA. De fábrica a bomba interrompe a dosagem a 4 mA e dosa na máxima frequência selecionada quando recebe 20 mA. Em programação é possível modificar estes due valores. A freqüência máxima é modificável durante o funcionamento, acionando simultaneamente as teclas mode enter e + para aumentar a vazão, ou ainda, as teclas mode enter e - para diminuí-la.

Visualização durante o funcionamento

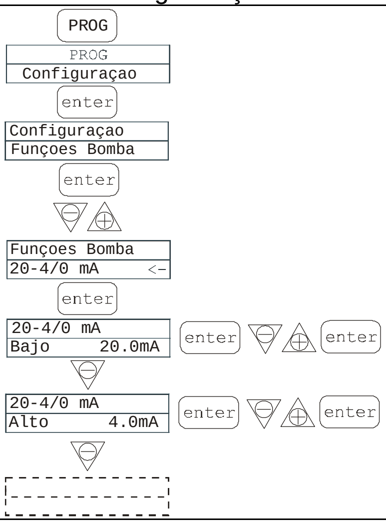


Visualização em seleção (tecla MODE)



Parágrafo 3 - Dosagem Proporcional a Sinal 20-4/0 mA

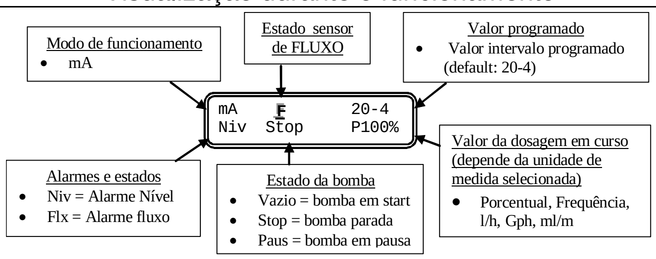
Programação



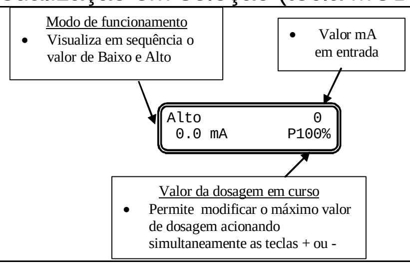
Funcionamento

A bomba dosa proporcionalmente a um sinal 20-4(0) mA. De fabrica bomba interrompe a dosagem a 20 mA e dosa na máxima frequência selecionada quando recebe 4 mA. Em programação é possível modificar estes dois valores. A freqüência máxima é modificável durante a fase de funcionamento acionando simultaneamente as teclas mode enter e + para aumentar a vazão, ou ainda, as teclas mode enter e - para diminuí-la.

Visualização durante o funcionamento

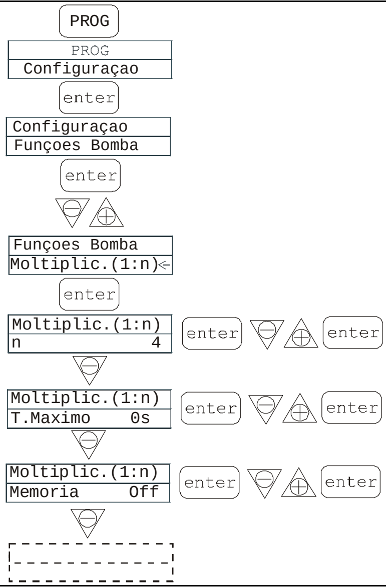


Visualização em seleção (tecla MODE)



Parágrafo 4 - Proporcional a impulsos externos (multiplicação)

Programação

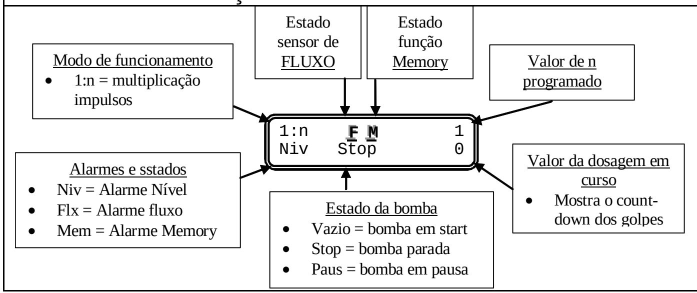


Funcionamento

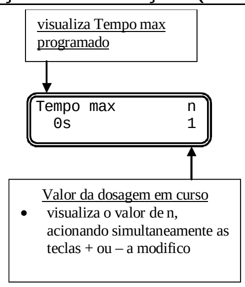
A bomba dosa proporcionalmente a um sinal externo (ex.: contador lança-impulsos). A cada sinal recebido a bomba efetua os "n" golpes programados. A bomba seleciona automaticamente a frequência de dosagem, adaptando-a ao tempo que intercorre entre dois sinais sucessivos. É possível programar em segundos o tempo (time/out) além do qual a bomba zera a contagem do intervalo, para evitar dosagens em tempos muito longos. A bomba dispõe da função memory, que assinala o recebimento de um sinal durante a dosagem. Se selecionada em Off se limita a assinalar, se em On assinala e memoriza os impulsos, a seguir os executa quando para de receber sinais.

O valor de "n" é modificável durante a fase de funcionamento acionando simultaneamente as teclas para aumentar o valor da vazão, ou ainda, as teclas para reduzi-lo.

Visualização durante o funcionamento

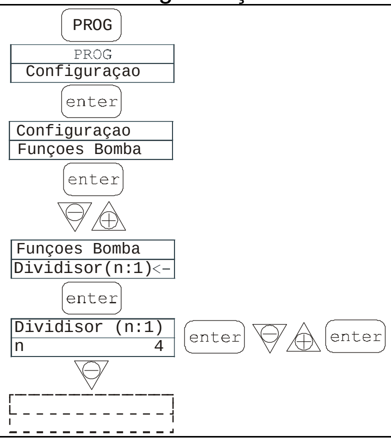


Visualização em seleção (tecla MODE)



Parágrafo 5 - Proporcional a impulsos externos (divisão)

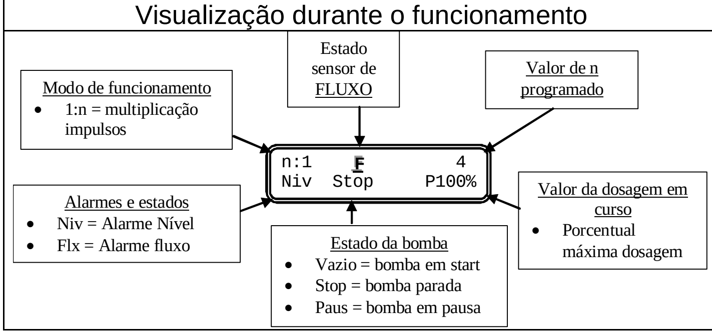
Programação



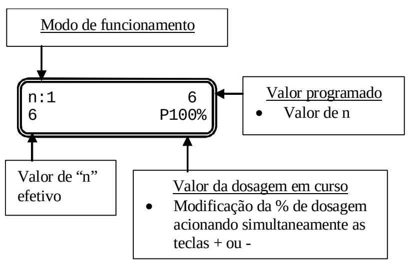
Funcionamento

A bomba dosa proporcionalmente a um sinal externo (ex.: contador lança-impulsos). A cada "n" sinais recebidos a bomba efetua um golpe. Em programação seleciono o valor de "n". Programando o valor de "n" se seleciona a % de dosagem máxima, durante a fase de funcionamento posso modificar este valor acionando simultaneamente as teclas para aumentá-lo, ou ainda as teclas para diminuí-lo.

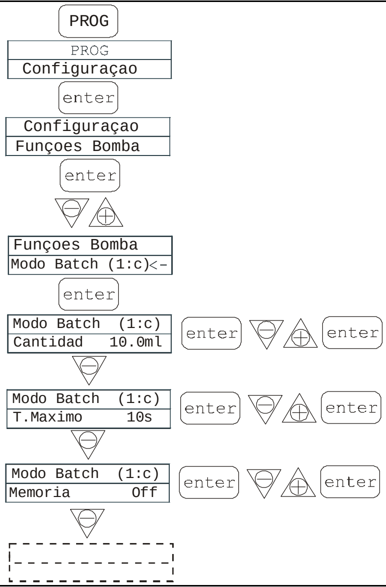
Visualização durante o funcionamento

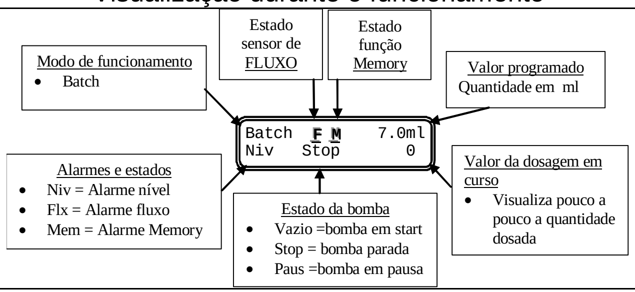
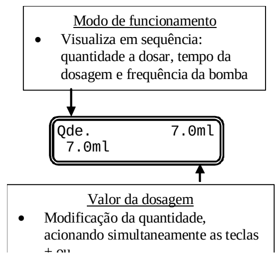


Visualização em seleção (tecla MODE)

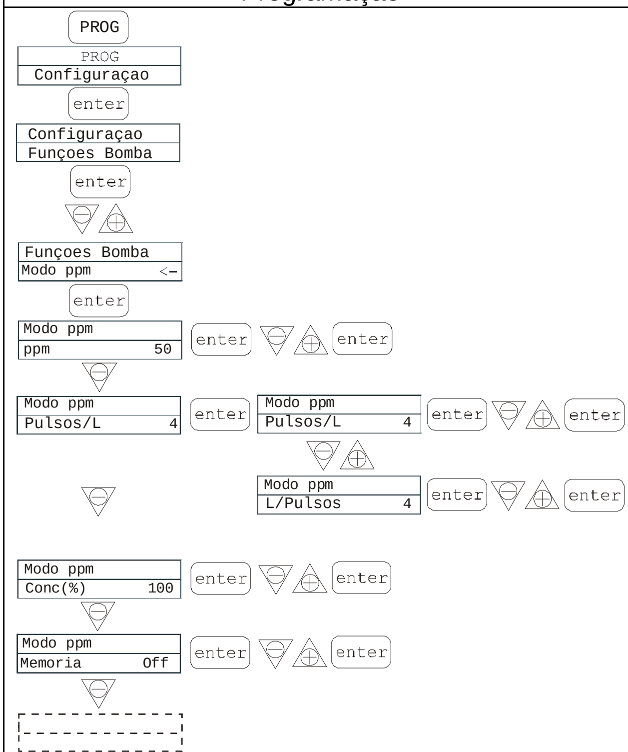


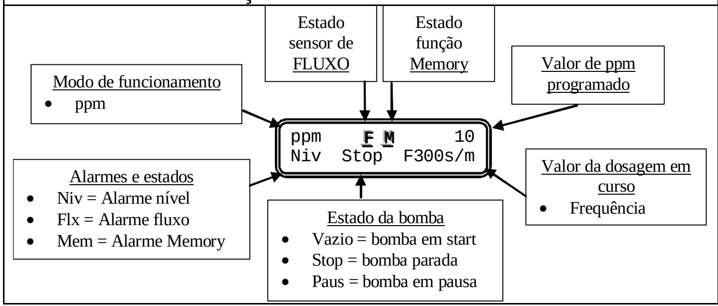
Parágrafo 6 - Proporcional a impulsos externos (dosagem batch)

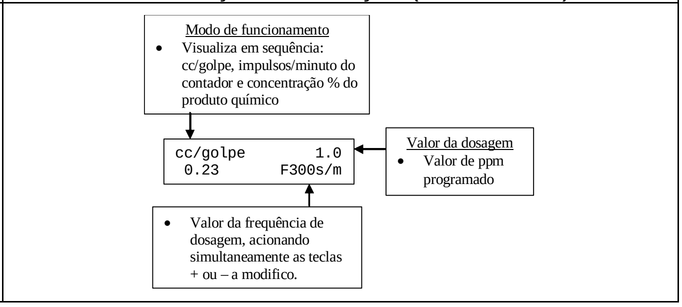
Programação	Funcionamento
	A bomba dosa proporcionalmente a um sinal externo (ex.: contador lança-impulos). Neste caso posso programar a quantidade a dosar em ml e o tempo no qual completar a dosagem. É possível fazer a dosagem manualmente através da pressão da tecla , ou ainda, através de um comando remoto. A tecla , interrompe a dosagem, que pode ser zerada acionando a tecla , ou ainda, reiniciada acionando novamente . A quantidade a dosar é modificável durante a fase de funcionamento acionando simultaneamente as teclas para aumentar a vazão, ou ainda, as teclas para diminuí-la.

Visualização durante o funcionamento	Visualização em seleção (tecla MODE)
	

Parágrafo 7 - Proporcional a impulsos externos (dosagem em PPM)

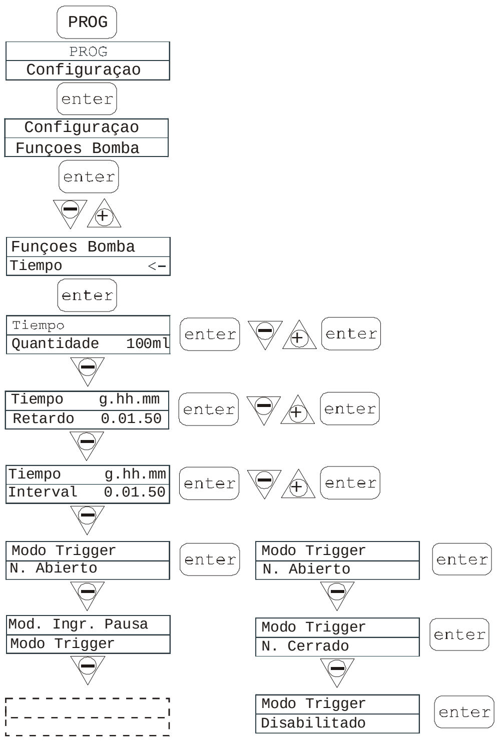
Programação	Funcionamento
	A bomba dosa proporcionalmente a um sinal externo (ex.: contador lança-impulsos) calculando automaticamente a relação entre sinais em entrada e golpes da bomba em função do valor de ppm programado. Os dados a inserir são o valor de ppm, a relação impulsos/litro (ou ainda litros/impulso) do contador e a concentração do produto a dosar. Durante a fase de funcionamento posso modificar a freqüência de dosagem, acionando simultaneamente as teclas para aumentá-la, ou ainda as teclas para diminuí-la.

Visualização durante o funcionamento	Visualização em seleção (tecla MODE)




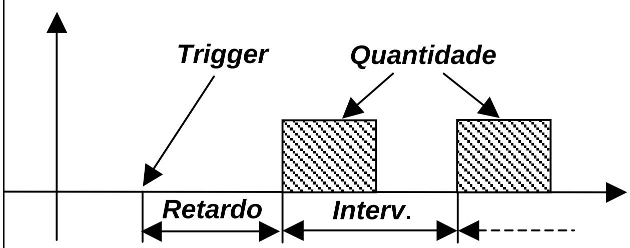
Parágrafo 8 – Dosagem temporizada **(Entrada do sinal de frequência "TRIGGER" activado)**

Programação

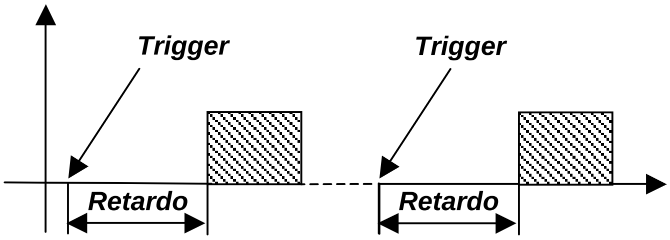


Funcionamento

Após a recepção do sinal de **TRIGGER** iniciado, a bomba doseia uma quantidade programável em ml. É possível estabelecer um tempo de atraso antes da dosagem (***Atraso***) e a distância entre as dosagens seguintes (***Interv***.) conforme ilustrado no esquema



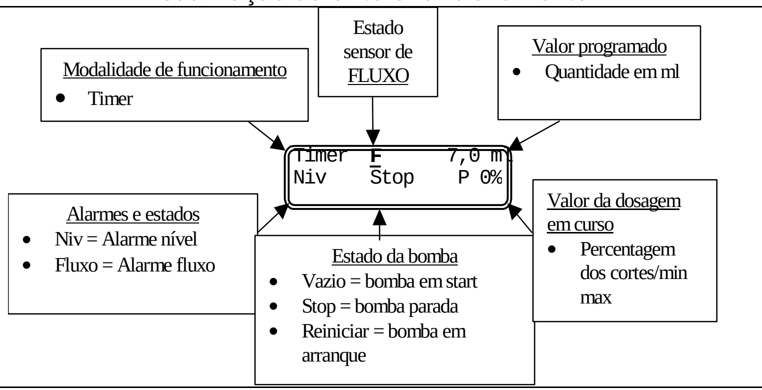
Ajustando, por exemplo, um tempo ***Interv***.= 0 obtém-se um sistema no qual a quantidade programada è doseada depois de cada sinal de **TRIGGER** (com o eventual atraso iniciado):

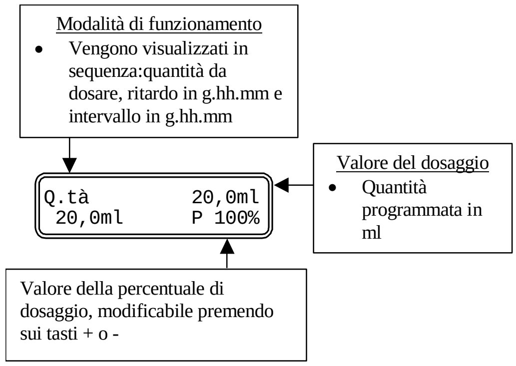


É possível iniciar a dosagem também premindo o botão +, o qual praticamente simula o sinal de **Trigger.**
O sinal **Trigger** pode ser iniciado em ***N.Abierto*** (activa-se quando a entrada passa da modalidade aberta para fechada) ou em ***N.Cerrado*** (activa-se quando a entrada passa da modalidade fechada para aberta).
O sinal **Trigger** fica bloqueado durante a dosagem (a sua recepção não se encontra memorizada nem gerida)
A entrada ***Pausa (Entrada telecomando)*** não pode ser programada e a sua activação bloqueia a dosagem, enquanto a desactivação seguinte remete o sistema em espera do sinal **Trigger** para uma nova dosagem.

Durante a fase de funcionamento da bomba, poderá alterar a frequência de dosagem, ao premir simultaneamente as teclas mode/enter e + para aumentar a frequência, ou também os botões mode/enter e – para a diminuir.

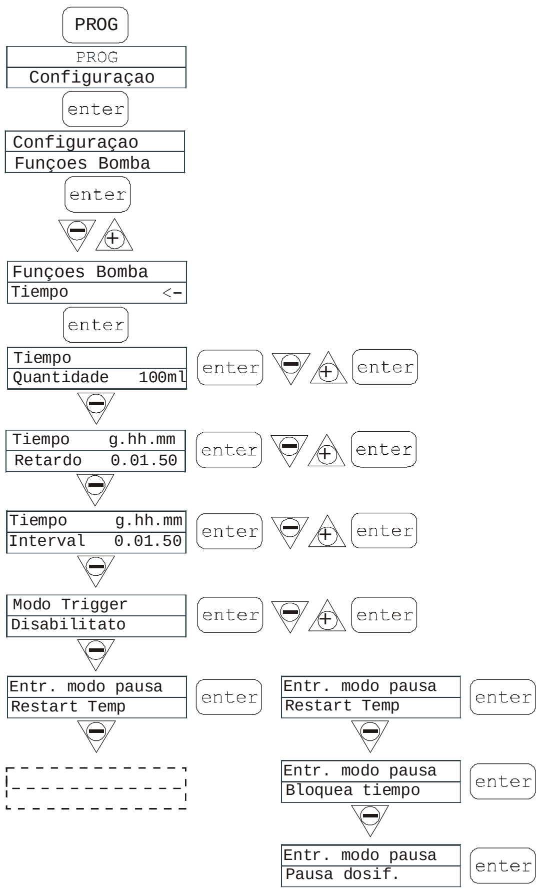
Visualização durante o funcionamento	Visualização em seleção (tecla MODE)



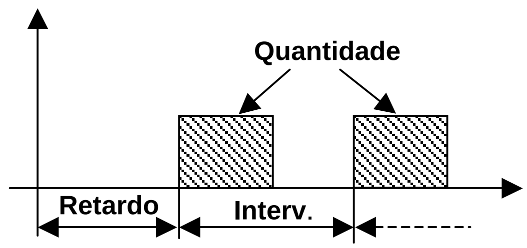


Parágrafo 8 – Dosagem temporizada **(Entrada do sinal de frequência “TRIGGER” não activado)**

Programação	Funcionamento



A bomba doseia uma quantidade programável em ml. Poderá ajustar um tempo de atraso no arranque da bomba (Atraso) e a distância entre duas intervenções seguidas (interv.), como indicado no esquema:



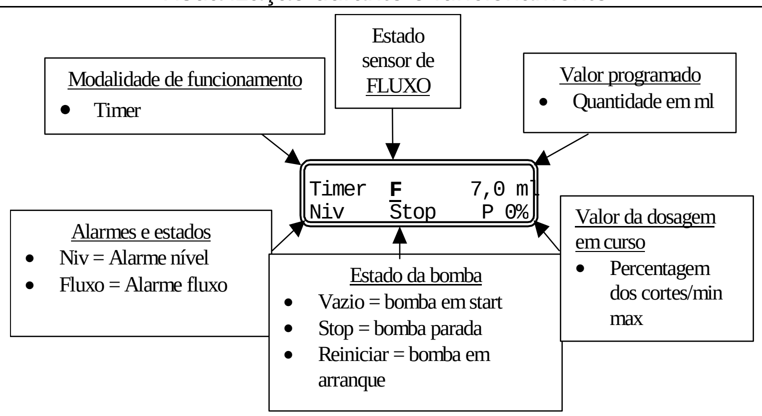
Os tempos de atraso e intervalo são exprimidos em dd.hh.mm (dias.horas.minutos)

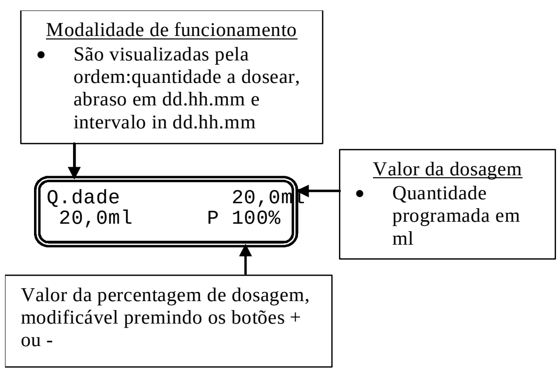
A entrada da ***Pausa*** pode ser programada de três maneiras diferentes:

1. **Bloquea tiempo:** com a pausa activada, o sistema bloqueia a contagem do tempo actual e retoma-o quando a pausa é desactivada
2. **Pausa dosif.:** com a pausa activada, o sistema continua a contar o tempo e bloqueia a dosagem
3. **Restart Temp:** com a pausa activada o sistema bloqueia a dosagem e quando a pausa é desactivada a contagem recomeça desde o princípio.

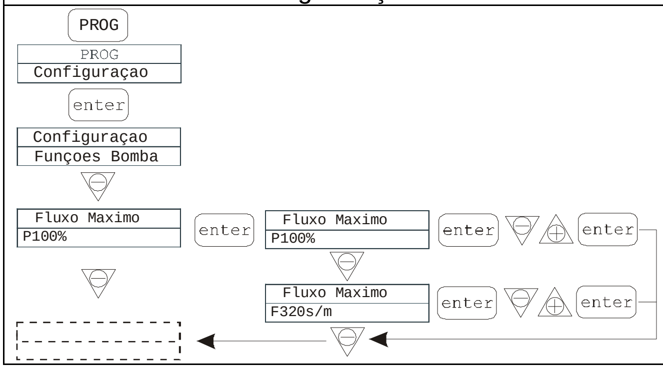
Durante a fase de funcionamento da bomba, poderá alterar a frequência de dosagem, ao premir simultaneamente as teclas mode enter (+) para aumentar a frequência, ou também os botões mode enter (−) para a diminuir.

Visualização durante o funcionamento	Visualização em seleção (tecla MODE)



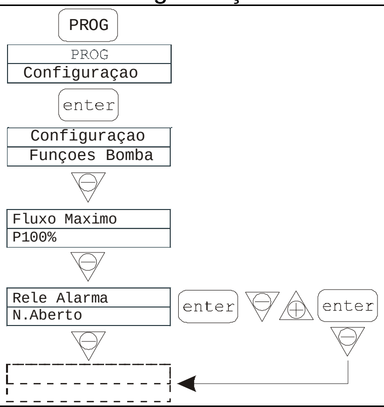


Parágrafo 9 - seleção máxima vasão

<table>
<tr><th>Programação</th><th>Funcionamento</th></tr>
<tr><td>
</td><td>Permite selecionar a máxima vazão alcançável pela bomba e a modalidade programada (% ou freqüência) fica a visualização da vazão na unidade de medida Standard.

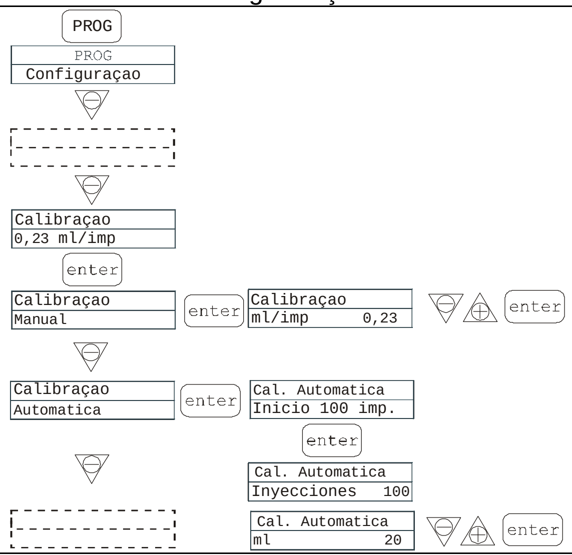
Acionando se acessa a modificação, e a seguir com as teclas seleciono o valor. Com confirmo e volto ao menu principal</td></tr>
</table>

Parágrafo 10 - Seleção do Relê de Alarme

<table>
<tr><th>Programação</th><th>Funcionamento</th></tr>
<tr><td>
</td><td>Na ausência de situação de alarme pode ser selecionado aberto (de fábrica) ou ainda, fechado.

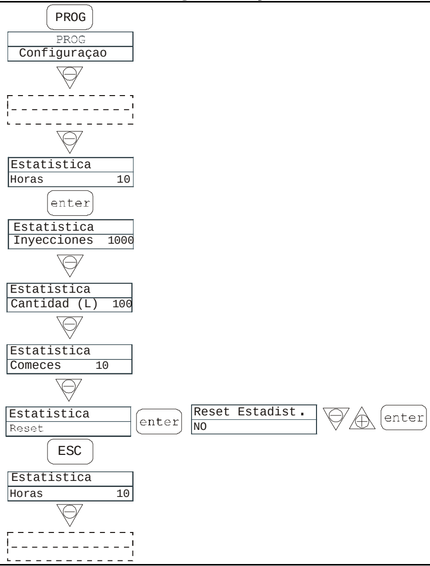
Acionando se acessa a modificação, a seguir com as teclas seleciono o valor. Com confirmo e volto ao menu principal</td></tr>
</table>

Parágrafo 11 – Calibração da vasão

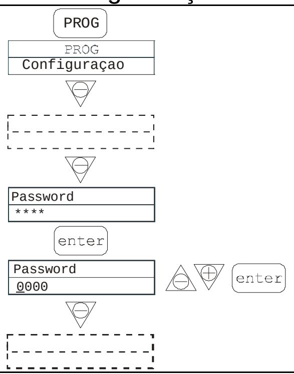
<table>
<tr><th>Programação</th><th>Funcionamento</th></tr>
<tr><td>
</td><td>No menu principal aparece o valor de cc por golpe em memória. É possível calibrar em duas modalidades:
MANUAL - insiro manualmente o valor de cc por golpe com as teclas e confirmo com
AUTOMÁTICA - a bomba executa 100 golpes, que são iniciados com a tecla e confirmo com , no final dos quais insiro a quantidade aspirada pela bomba com as teclas e confirmo com .

O dado inserido será utilizado nos cálculos das vazões.</td></tr>
</table>

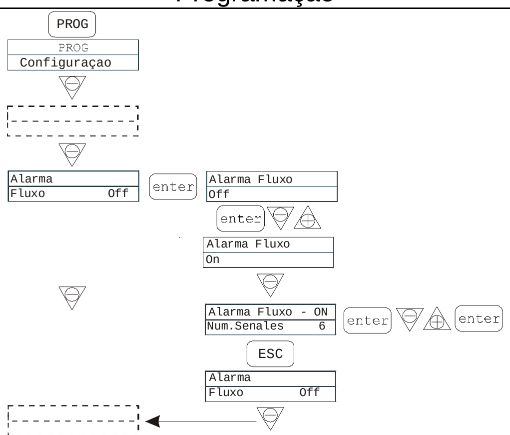
Parágrafo 12 - Estatísticas

Programação	Funcionamento
	No menu principal visualiza as horas de funcionamento da bomba, acionando a tecla mode enter acesso as outras estatísticas: - Strokes = número de golpes executados pela bomba - Q.ty(L) = quantidade dosada pela bomba expressa em litros; este dado é calculado com base no valor cc/stroke na memória - Power = número de acionamentos da bomba Reset = as teclas ⊕ ⊖ decido se zerar os contadores (YES) ou ainda não (NO), com mode enter confirmo. A pressão de ESC permite voltar ao menú principal.

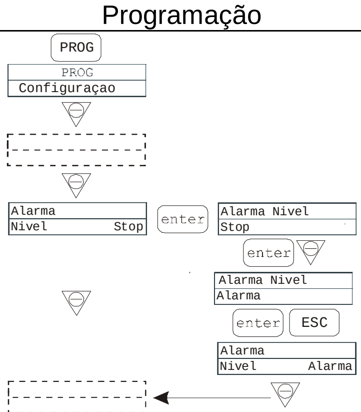
Parágrafo 13 - Senha

Programação	Funcionamento
	Inserindo a senha, poderei entrar em programação e ver todos os valores selecionados, mas cada vez que tentar modifica-los será pedida a senha. A linha lampejante indica o número modificável, com a tecla ⊕ seleciono o número (de 1 a 9), com a tecla ⊖ seleciono o número a modificar, a seguir com mode enter confirmo. Selecionando “0000” (fábrica), a senha será excluída.

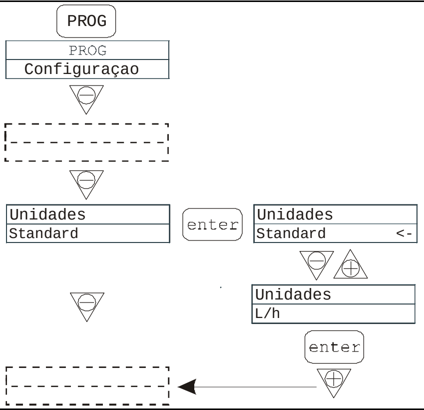
Parágrafo 14 - Alarme de Fluxo

Programação	Funcionamento
	Permite ativar (desativar) o sensor de fluxo. Uma vez ativado (On) acionando a tecla ⊖ se acessa a requisição de quantos sinais a bomba espera antes de entrar em alarme. Acionando mode enter lampeja o número, a seguir, com as teclas ⊕ ⊖ seleciono o valor. Com mode enter confirmo. Acionando ESC volto ao menu principal

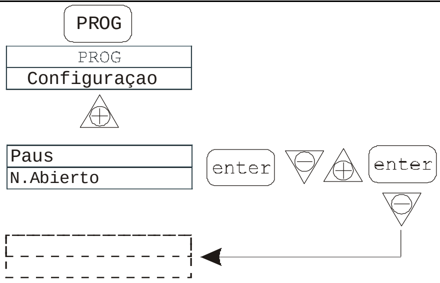
Parágrafo 15 - Alarme de Nível

Programação	Funcionamento
	Permite selecionar a bomba quando se ativa o alarme do sensor de nível, isto é ,se bloquear a dosagem (Stop), ou ainda se simplesmente ativar a sinalização de alarme sem bloquear a dosagem. Acionando mode enter se acessa a modificação, a seguir com as teclas ⊕ ⊖ seleciono o tipo de alarme. Com mode enter confirmo. Acionando ESC volto ao menu principal

Parágrafo 16 - Unidade de visualização de vazão

Programação	Funcionamento
	Permite selecionar a unidade de medida da dosagem no display em visualização. Acionando [mode enter] se acessa a modificação, a seguir, com as teclas [+] [-] seleciono o tipo de unidade de medida, L/h (Litros/hora), Gph (Galões/hora), ml/m (mililitros/minuto) ou Standard (% ou freqüência, conforme foi selecionado). Com [mode enter] confirmo e volto ao menu principal

Parágrafo 17 – Ajuste Pausa

Programação	Funcionamento
	Entrada remota para colocar a bomba em pausa. Na fábrica o sistema é ajustado como Normalmente Aberto. Ao premir [mode enter] poderá ter acesso à alteração. Com as teclas [+] [-] poderá ajustar o valor (N. ABERTO ou N. FECHADO) Com [mode enter] poderá confirmar e voltar ao menu principal.

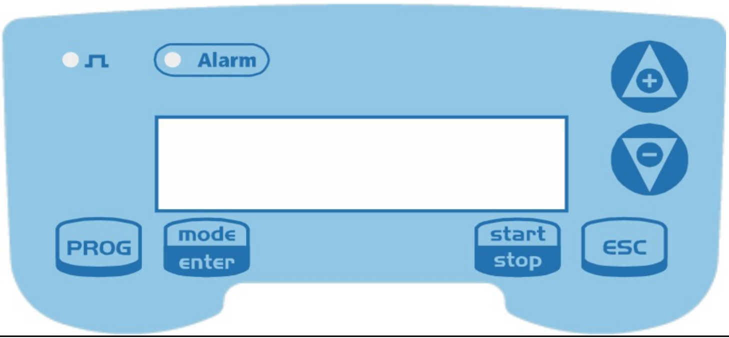
Ajuste do contraste do display.

Para ajustar o contraste o display manter apertou o [esc] durante 5 segundos, apertar [+] o [-] para aumentar ou disminuir o contraste.

Alarmes

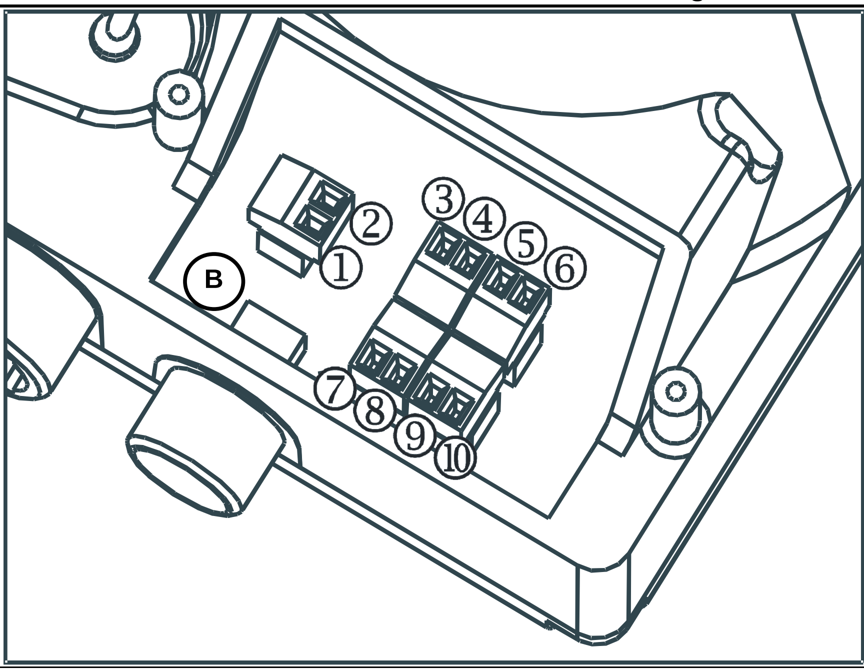
Visualização	**Causa**	**Interrupção**
Led Alarme fixo Escrita lev lampejante Ex: `Man` `Lev P100%`	Alarme de fim de nível, sem interrupção do funcionamento da bomba	Restauração do nível do líquido.
Led Alarme fixo Escrita lev e stop lampejante Ex: `Man` `Lev Stop P100%`	Alarme de fim de nível, com interrupção de funcionamento da bomba	Restauração do nível do líquido
Escrita Mem lampejante Ex: `1:n 6` `Mem`	A bomba recebe um ou mais impulsos durante a dosagem com função memory em Off	Pressionar al tecla [start stop]
Escrita Mem lampejante Ex: `1:n M 6` `Mem`	A bomba recebe um ou mais impulsos durante a dosagem com função memory em On	Quando a bomba acaba de receber os impulsos externos devolve os golpes memorizados
Led Alarme fixo Escrita Flw lampejante Ex: `Man F` `Flw P100%`	Alarme de fluxo ativo, a bomba não recebeu o número de sinais programados pelo sensor de fluxo.	Pressionar a tecla [start stop]
Ex: `Parameter Error` `PROG to default`	Erro de comunicação interna da CPU.	Pressionar a tecla [PROG] para restaurar os parâmetros de default.

Kumanda Paneli – TEKNA TPG



	Programlama menüsüne erişim
	Pompa çalışırken basıldığında, programlanan değerleri ekranda sırayla gösterir;  veya  tuşlarıyla aynı anda basıldığında, seçilen çalışma moduna bağlı olarak bir değeri artırır veya azaltır. Programlama sırasında bir “Enter” tuşu işlevi görerek çeşitli menü düzeylerine girişi ve bu düzeylerdeki değişiklikleri onaylar.
	Pompayı çalıştırır ve durdurur. Bir düzey alarmı (yalnızca alarm işlevi), debi alarmı ve etkin bellek alarmı meydana gelmesi durumunda, ekrandaki sinyali devre dışı bırakır.
	Çeşitli menü düzeylerinden “çıkmak” için kullanılır. Programlama aşamasından tamamen çıkmadan önce değişiklikleri kaydetmek isteyip istemediğiniz sorulur.
	Menüde yukarı doğru hareket etmek veya değiştirilecek sayısal değerleri artırmak için kullanılır. Batch (Toplu işletim) modunda dozajlamayı başlatmak için kullanılabilir
	Menüde aşağı doğru hareket etmek veya değiştirilecek sayısal değerleri azaltmak için kullanılır.
	Dozajlama sırasında yeşil LED yanıp söner
	Çeşitli alarm durumlarında yanan kırmızı LED

Elektrik bağlantıları



1	Alarm rölesi	
2		
3	+ kutbu	4-20 mA giriş sinyali Giriş Empedansı: 200 ohm
4	- kutbu	
5	-Uzaktan kumanda girişi (çalıştır-durdur)	
6	-Giriş Sinyal Duraklat	
7	-Frekans sinyali girişi (su sayacı darbe göndericisi)	
8	-Harici tetikl girişi	
9	Debi sensörü girişi	
10		
B	Giriş düzeyi kontrolü	

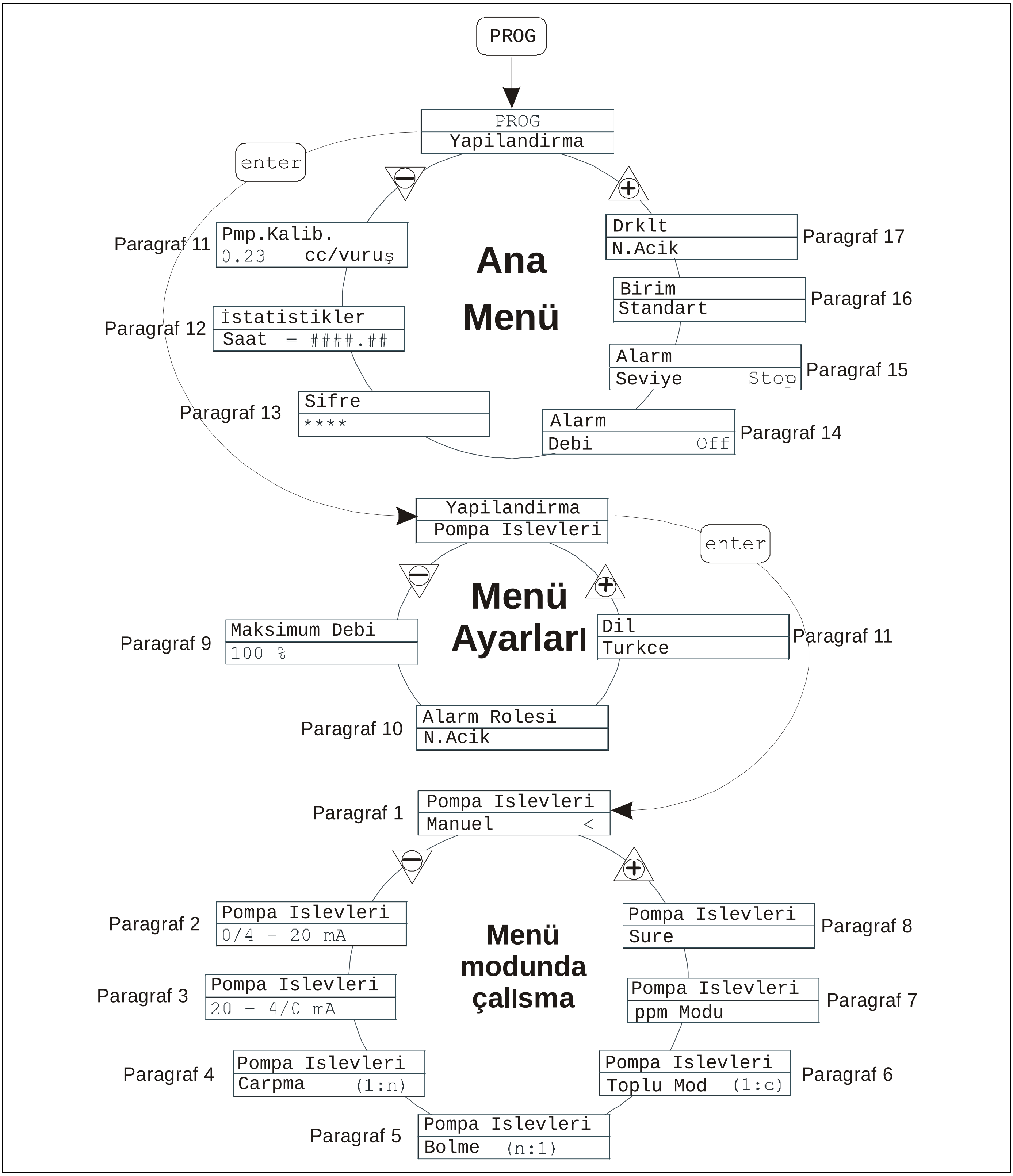
Tekna TPG Programlama Menüsü

PROG tuşuna üç saniye kadar basarak programlama menüsüne erişebilirsiniz. Menü içinde gezinmek için ⊕ ⊖ tuşları, değişikliklere erişmek için mode enter tuşu kullanılabilir.

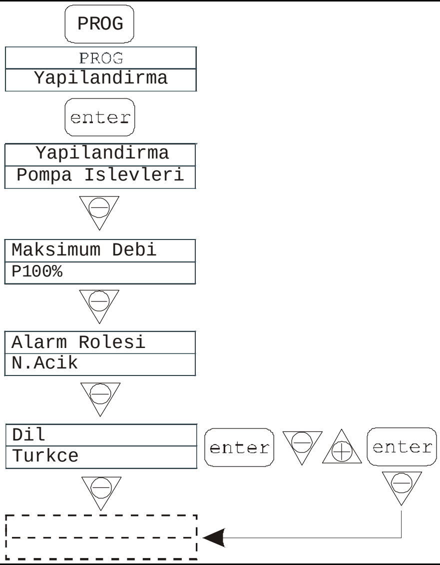
Pompa fabrikada sabit modda programlanmıştır. Pompa, 1 dakika herhangi bir işlem yapılmazsa otomatik olarak çalışma moduna döner. Bu durumda girilen veriler kaydedilmez.

ESC tuşu çeşitli programlama düzeylerinden çıkmak için kullanılabilir. Programlamadan çıkıldıktan sonra, şu ekran görüntülenir:

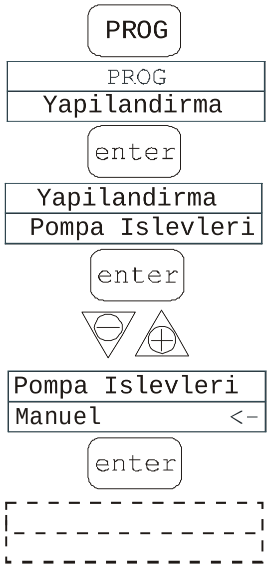
Exit (Çık)		Exit (Çık)	
Don't Save	∇ ∆	Save (Kaydet)	mode enter to confirm the selection (seçimi onaylamak için)

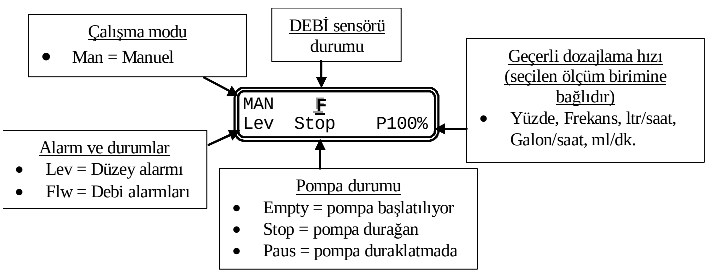
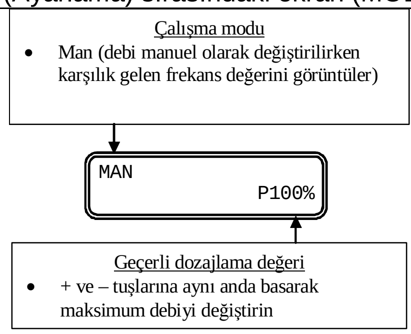


Dili Ayarlama

Programlama	İşlem
	Dili seçmenize olanak sağlar. Pompa menü dili fabrikada İngilizce'ye ayarlanmıştır. mode enter tuşuna basıp ardından yeni değeri girmek için tuşlarına basılarak değişiklik yapılabilir. Onaylamak ve ana menüye dönmek için mode enter tuşuna basın

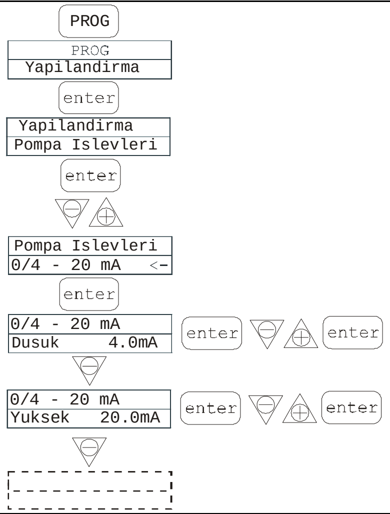
Paragraf 1 – Manual Dosage (Manuel Dozajlama)

Programlama	İşlem
	Pompa, sabit modda çalışır. Debi, mode enter tuşlarına aynı anda basıp artırılarak veya mode enter tuşlarına basıp azaltılarak yalnızca manuel olarak ayarlanabilir.

Operation (Çalışma) sırasındaki ekran	Setting (Ayarlama) sırasındaki ekran (MODE tuşu)
	

Paragraf 2 - Dosage Proportional to Signal 0/4-20 (0/4-20 Sinyaline Orantılı Dozajlama)

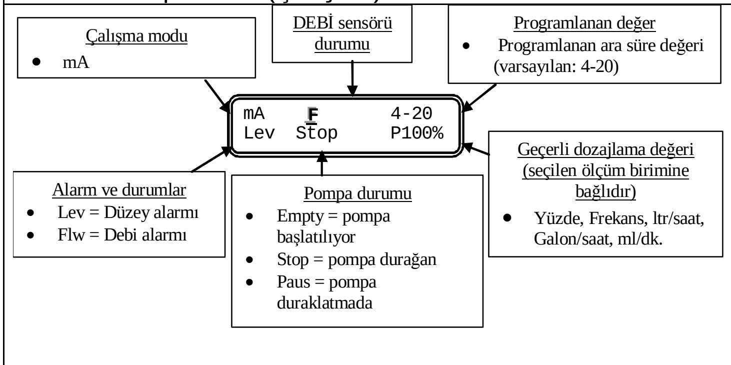
Programlama



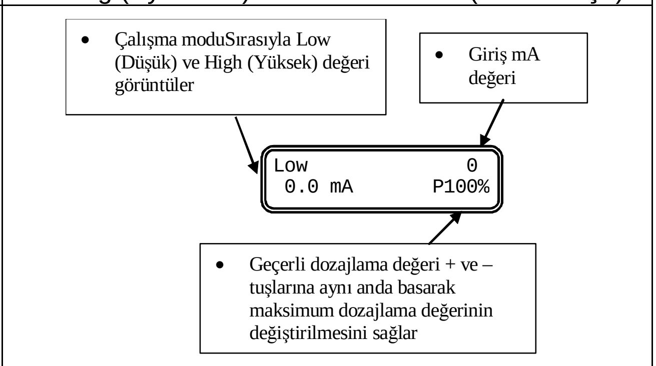
İşlem

Pompa (0)4-20 mA arasında bir sinyalde orantılı olarak dozajlama gerçekleştirir. Fabrika ayarlarına bağlı olarak, pompa dozajlamayı 4 mA sinyalinde durdurur ve 20 mA sinyal aldığında ayarlanan maksimum frekansla dozajlama gerçekleştirir. Bu iki değer, programlama sırasında değiştirilebilir. Maksimum frekans, tuşlarına aynı anda basıp artırılarak veya tuşlarına basıp azaltılarak pompa çalışırken değiştirilebilir.

Operation (Çalışma) sırasındaki ekran

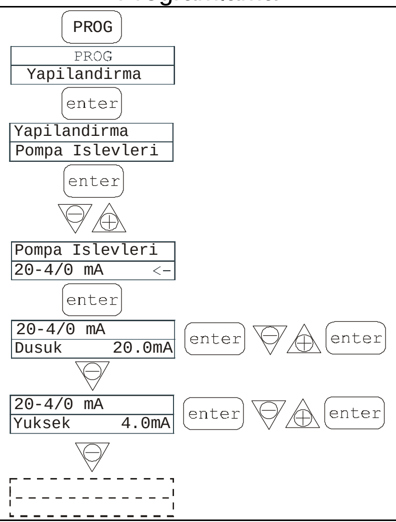


Setting (Ayarlama) sırasındaki ekran (MODE tuşu)



Paragraf 3 - Dosage Proportional to Signal 20-4/0 (20-4/0 Sinyaline Orantılı Dozajlama)

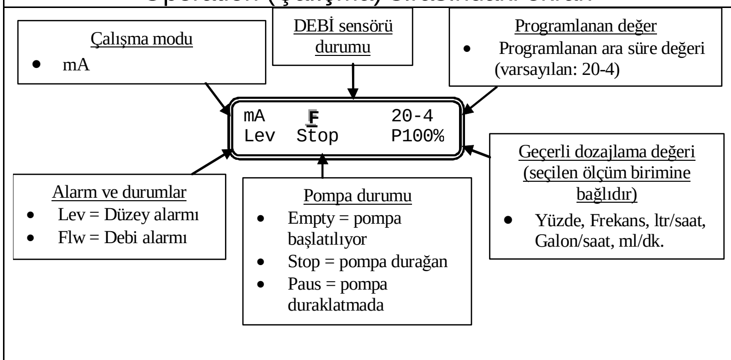
Programlama



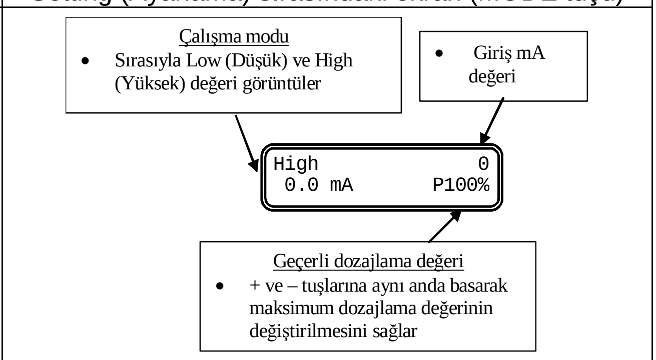
İşlem

Pompa 20-4(0) mA arasında bir sinyalde orantılı olarak dozajlama gerçekleştirir. Fabrika ayarlarına bağlı olarak, pompa dozajlamayı 20 mA sinyalinde durdurur ve 4 mA sinyal aldığında ayarlanan maksimum frekansla dozajlama gerçekleştirir. Bu iki değer, programlama sırasında değiştirilebilir. Maksimum frekans, tuşlarına aynı anda basıp artırılarak veya tuşlarına basıp azaltılarak pompa çalışırken değiştirilebilir.

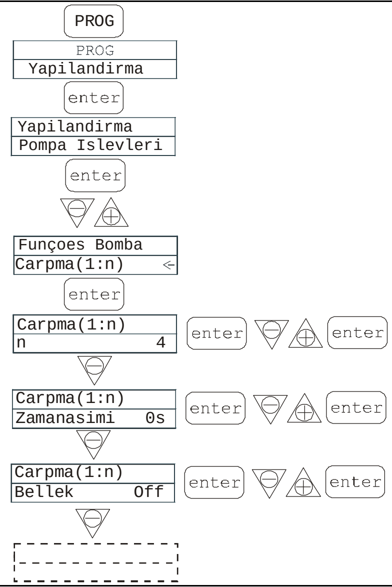
Operation (Çalışma) sırasındaki ekran

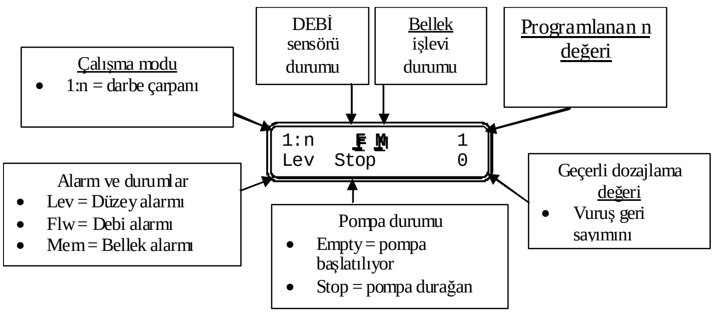
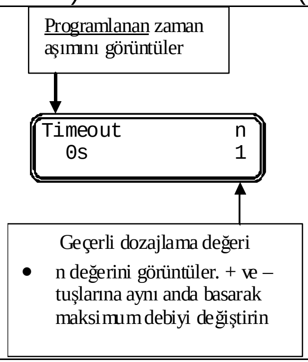


Setting (Ayarlama) sırasındaki ekran (MODE tuşu)

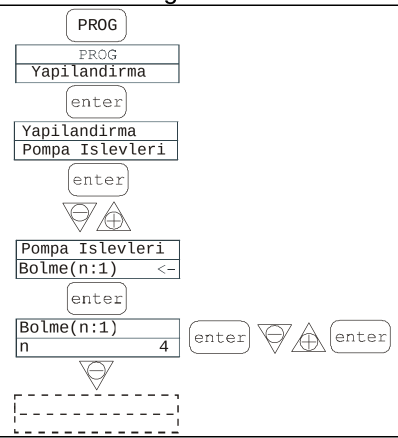


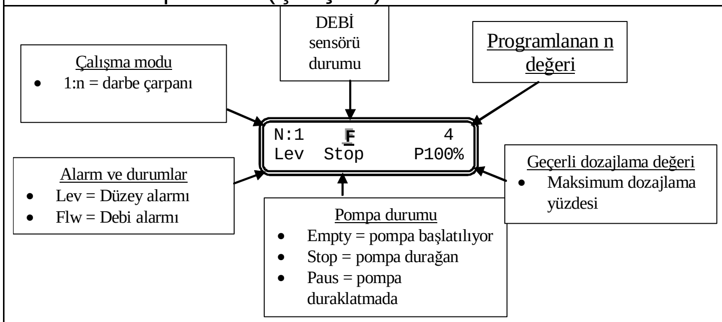
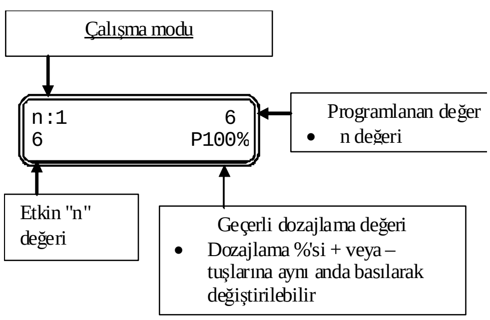
Paragraf 4 – Proportional to External Impulses (Harici Darbelere Orantılı) (çarpanlı)

Programlama	İşlem
	Pompa, harici bir sinyale (örn. sinyal darbe sayacı) orantılı olarak dozajlama gerçekleştirir. Pompa, alınan her sinyalde programlanan "n" sayıda vuruş gerçekleştirir. Pompa, dozajlama frekansını ard arda iki sinyal arasında geçen süreye uyarlayarak otomatik olarak ayarlar. Süre (zaman aşımı) saniye cinsinden ayarlanabilir; bu, dozajlamanın çok uzun süreler boyunca yapılmasını önlemek için pompanın belirlenen değer aşıldıktan sonra ara süre sayacını sıfırladığı süredir. Pompa, dozajlama sırasında sinyal alımını gösteren bir bellek işlevine sahiptir. Off (Kapalı) olarak ayarlanırsa, yalnızca bir sinyal gönderir; On (Açık) olarak ayarlanırsa, bir sinyal gönderip darbeleri hafızaya alır ve sinyal alımı bittiğinde bu darbeleri yürütür. "n" değeri, tuşlarına aynı anda basıp artırılarak veya tuşlarına basıp azaltılarak pompa çalışırken değiştirilebilir.

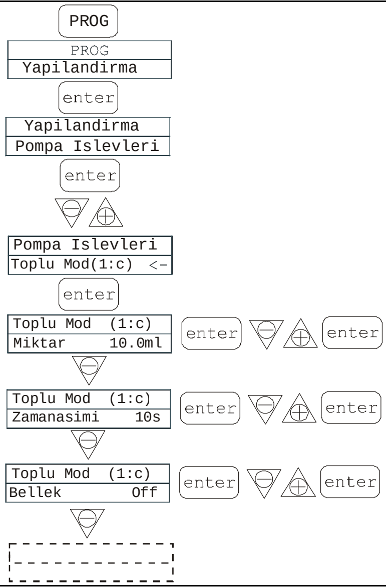
Operation (Çalışma) sırasındaki ekran	Setting (Ayarlama) sırasındaki ekran (MODE tuşu)
	

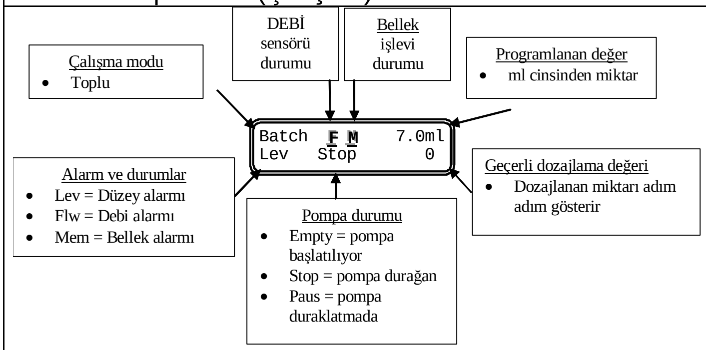
Paragraph 5 – Proportional to External Impulses (division)

Programlama	İşlem
	Pompa, harici bir sinyale (örn. sinyal darbe sayacı) orantılı olarak dozajlama gerçekleştirir. Her "n" sinyalde, pompa bir vuruş gerçekleştirir. Programlama sırasında "n" değerini ayarlayabilirsiniz. "n" değerini programlayarak maksimum dozaj %'ni ayarlarsınız. Bu değer, tuşlarına aynı anda basıp debi artırılarak veya tuşlarına basıp debi azaltılarak pompa çalışırken değiştirilebilir.

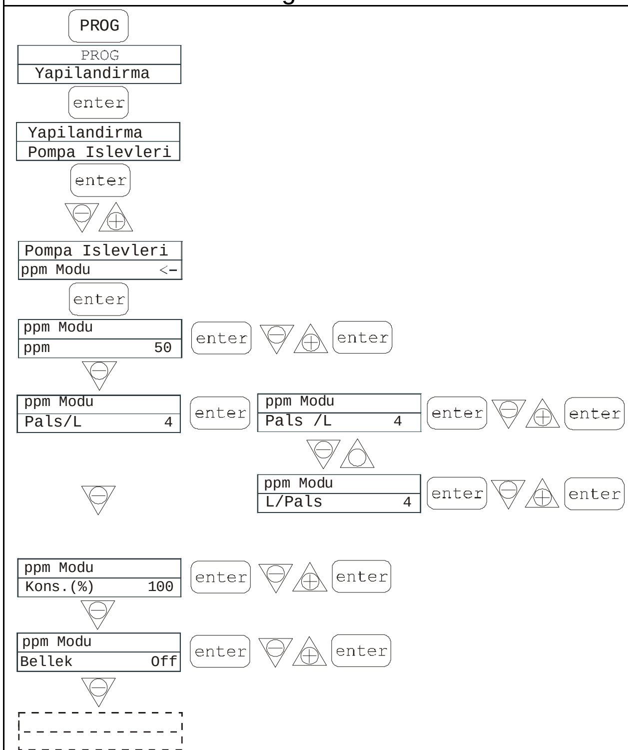
Operation (Çalışma) sırasındaki ekran	Setting (Ayarlama) sırasındaki ekran (MODE tuşu)
	

Paragraf 6 – Proportional to External Impulses (Harici Darbelere Orantılı) (toplu dozajlama)

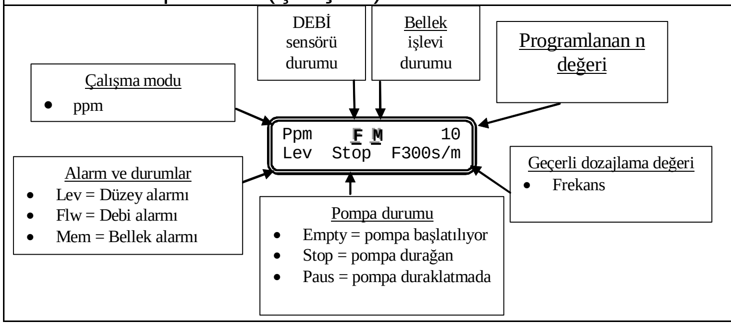
Programlama	İşlem
	Pompa, harici bir sinyale (örn. sinyal darbe sayacı) orantılı olarak dozajlama gerçekleştirir. Bu durumda, ml cinsinden dozajlanacak miktar ve dozajlamanın tamamlanacağı süre ayarlanabilir. Dozajlama  tuşuna basılarak veya bir uzaktan kumanda sinyali kullanılarak manuel olarak başlatılabilir.  tuşu dozajlamayı duraklatır, daha sonra  tuşuna basılarak dozajlama sıfırlanabilir veya  tuşuna yeniden basılarak tekrar başlatılabilir. Dozajlanacak miktar,   tuşlarına aynı anda basıp debi artırılarak veya   tuşlarına basıp debi azaltılarak pompa çalışırken değiştirilebilir.

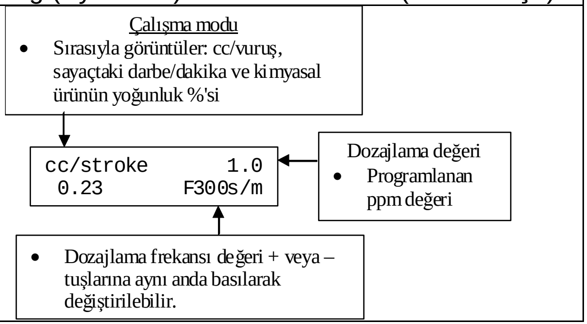
Operation (Çalışma) sırasındaki ekran	Setting (Ayarlama) sırasındaki ekran (MODE tuşu)
	

Paragraf 7 – Proportional to External Impulses (Harici Darbelere Orantılı) (ppm dozajlama)

Programlama	İşlem
	Pompa, harici bir sinyale (örn. darbe başlatma sayacı) orantılı olarak dozajlama gerçekleştirir; bunu, programlanan ppm değerini esas alarak gelen sinyaller ile pompa vuruşları arasındaki ilişkiyi otomatik olarak hesaplayarak yapar. Girilmesi gereken değerler ppm değeri, sayacın darbe/litre oranı (veya litre/darbe) ve dozajlanacak ürünün yoğunluğudur. Dozajlama frekansı,   tuşlarına aynı anda debi basıp artırılarak veya   tuşlarına basıp debi azaltılarak pompa çalışırken değiştirilebilir.

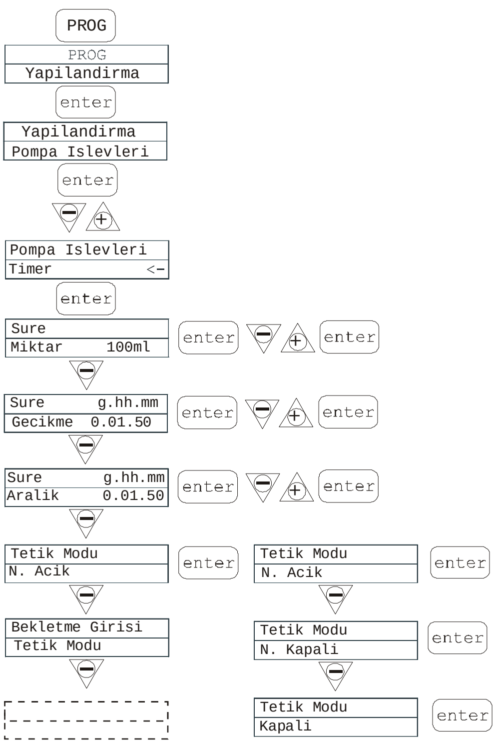
Operation (Çalışma) sırasındaki ekran	Setting (Ayarlama) sırasındaki ekran (MODE tuşu)
(see below)	(see below)

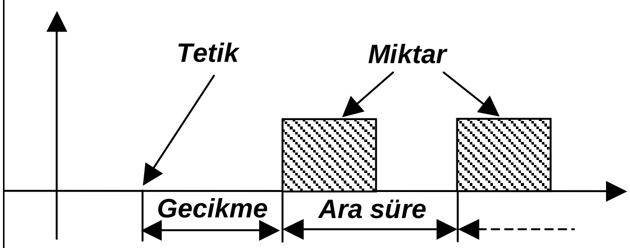




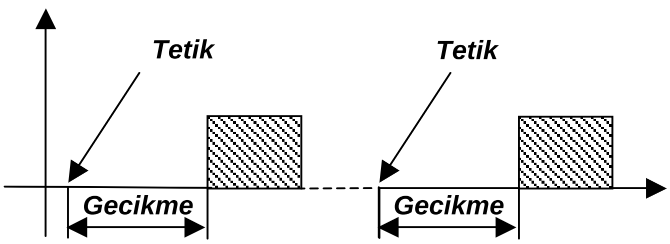
Paragraph 8 – Timed Dosage (Zamanlanmış Dozajlama) **("*TETIK*" aktif hale getirilmiş durumda)**

Programlama	İşlem
	Pompa, girilen ***TETIK*** sinyalini aldıktan sonra ml cinsinden programlanabilen dozaj miktarını ayarlar. Aşağıdaki şemada gösterildiği üzere dozajlamadan önce bir geciktirme süresi (***Geciktirme***) ve iki ard arda dozaj işlemi arasındaki bir ara süre (***Ara süre***) ayarlanabilir:



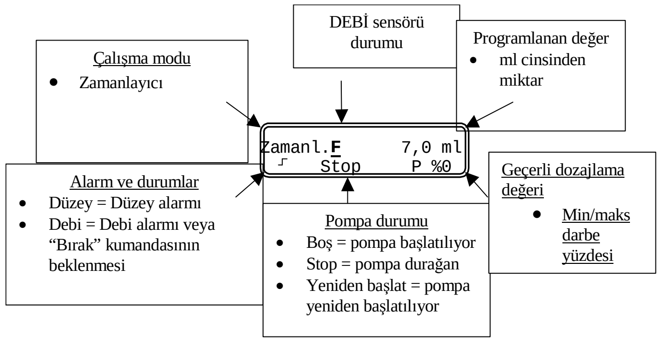
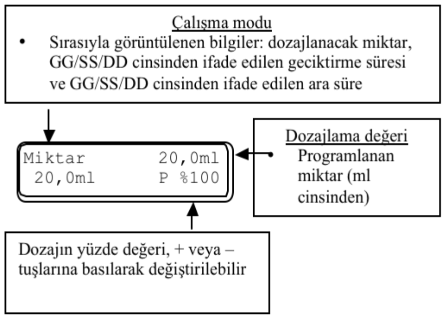


Örneğin, eğer ***Ara süre*** = 0 girilirse, programlanan dozaj miktarının "***TETIK*** " sinyali her alındığında verildiği bir sistem elde edilir (gerekirse girilen geciktirme süresi ile verilir):

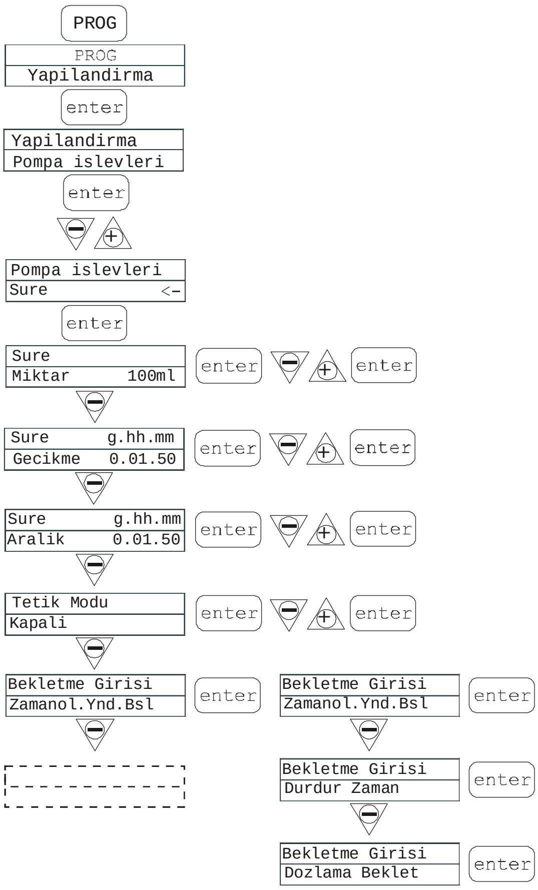
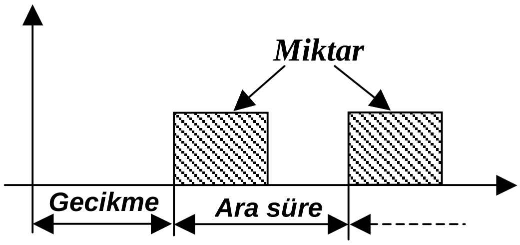


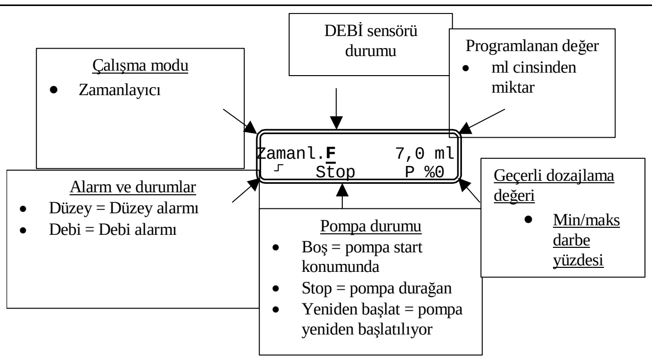
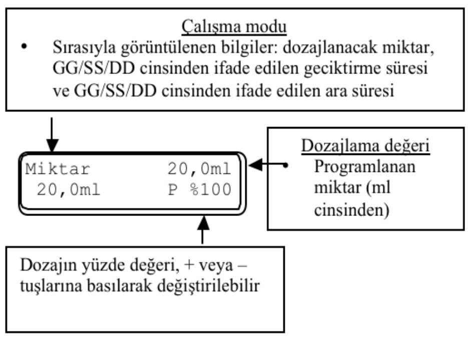
Uygulamada ***"Bırak"*** sinyalini simüle eden + tuşuna basılarak ta dozaj işleminin başlatılması mümkündür.
" Tetik " sinyali ***NO*** veya ***NF*** konumuna getirilebilir (birinci durumda girişin açık moddan kapalı moda geçtiğinde sinyal aktif hale gelir, ikincisinde ise girişin kapalı moddan açık moda geçtiğinde sinyal aktif hale gelir).
" Tetik " sinyali dozaj işlemi sırasında bloke olur (sinyali alma işlemi ne kaydedilmez ne de yönetilmez).
Duraklama girişi (***Uzaktan kumanda girişi***) programlanamaz ve aktif hale getirilirse dozaj işlemi bloke olur, halbuki bu girişin aktif halden çıkması halinde sistem yeni bir dozaj işlemine başlamak için " ***Tetik "*** sinyalini bekleme durumuna yeniden getirilir.

Pompanın çalışma aşaması sırasında dozaj frekansını değiştirmek mümkündür. mode enter + tuşlarına aynı anda basılarak *frekans artırılır*, mode enter – tuşlarına aynı anda basılarak *frekans düşürülür*.

Operation (Çalışma) sırasındaki ekran	Setting (Ayarlama) sırasındaki ekran (MODE tuşu)
	

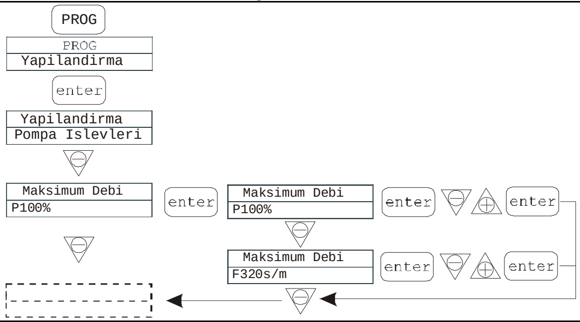
Paragraph 8 – Timed Dosage (Zamanlanmış Dozajlama) **(*"TETIK"* aktif hale getirilmemiş durumda)**

Programlama	İşlem
	Pompa ml cinsinden programlanabilen dozaj miktarını ayarlar. Aşağıdaki şemada gösterildiği üzere pompanın çalışmaya başladığı anda bir geciktirme süresi (***Geciktirme***) ve iki ard arda dozaj arasındaki süreyi (***Ara süre***) girmek mümkündür:  ***Geciktirme*** ve ***Ara süre*** süreleri GG/SS/DD (gün/saat/dakika) biçimindedir. ***Duraklama*** girişi üç farklı modda programlanabilir: 1. ***Zamanlayıcının kilitlenmesi***: duraklama aktif hale getirildiğinde, sistem zaman sayacını durdurur, duraklama aktif halden çıkarıldığında zaman sayacını yeniden çalıştırır. 2. ***Dozaj işlemi sırasında duraklama***: duraklama aktif hale getirildiğinde, sistem zaman sayacını çalıştırmaya devam edip dozaj işlemini durdurur. 3. ***Zamanlayıcının yeniden çalıştırılması***: duraklama aktif hale getirildiğinde, sistem dozaj işlemini durdurur ve duraklama aktif halden çıkarıldığında zaman sayacını yeniden başlangıçtan çalıştırır. Pompanın çalışma aşaması sırasında dozaj frekansını değiştirmek mümkündür. mode enter ⊕ tuşlarına aynı anda basılarak ***frekans artırılır***, mode enter ⊖ tuşlarına aynı anda basılarak ***frekans düşürülür***.

Operation (Çalışma) sırasındaki ekran	Setting (Ayarlama) sırasındaki ekran (MODE tuşu)
	

Paragraf 9 – Setting the Maximum Flow (Maksimum Debiyi Ayarlama)

Programlama

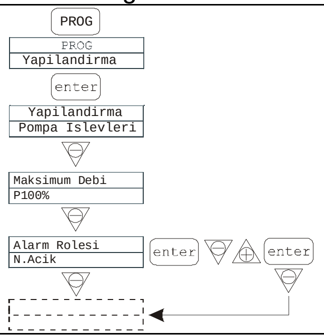


İşlem

Bu özellik sayesinde, pompanın sağladığı maksimum debi ayarlanabilir ve debi görüntülenirken standart ölçü birimi olarak programlanan mod (% veya frekans) kullanılır. tuşuna basıp ardından yeni değeri girmek için tuşlarına basılarak değişiklik yapılabilir. Onaylamak ve ana menüye dönmek için tuşuna basın

Paragraf 10 – Setting the Alarm Relay (Alarm Rölesini Ayarlama)

Programlama

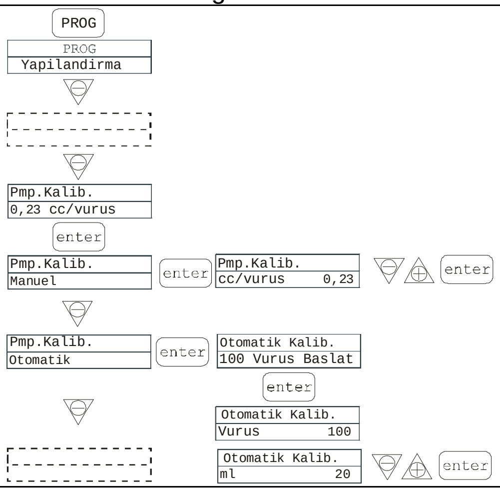


İşlem

Bir alarm durumu olmadığında, açık (varsayılan) veya kapalı olarak ayarlanabilir.
tuşuna basıp ardından yeni değeri girmek için tuşlarına basılarak değişiklik yapılabilir. Onaylamak ve ana menüye dönmek için tuşuna basın

Paragraf 11 – Flow Calibration (Debi Kalibrasyonu)

Programlama



İşlem

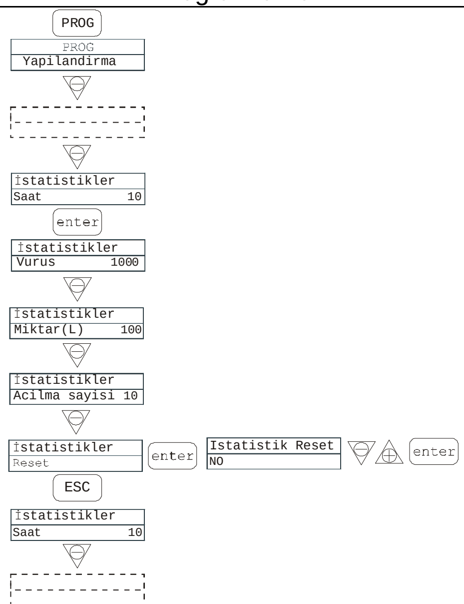
Ana menüde, hafızaya alınan vuruş başına cc değeri görünür. İki farklı şekilde kalibre edilebilir:

MANUAL (MANUEL) – tuşlarını kullanarak vuruş başına cc değerini manuel olarak girin ve tuşuna basarak onaylayın

AUTOMATIC (OTOMATİK)– pompa, tuşuna basılarak başlatılan 100 vuruş yapar. Bu işlemin sonunda, tuşlarını kullanarak pompa tarafından emilen miktarı girin ve tuşuna basarak onaylayın.
Girilen sayı, debi hesaplamalarında kullanılacaktır.

Paragraf 12 - Statistics (İstatistikler)

Programlama

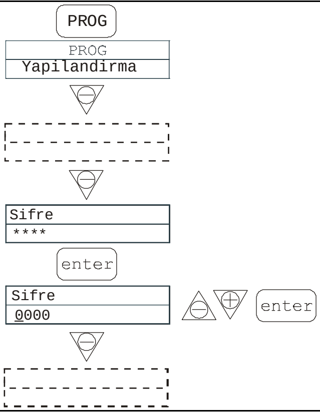


İşlem

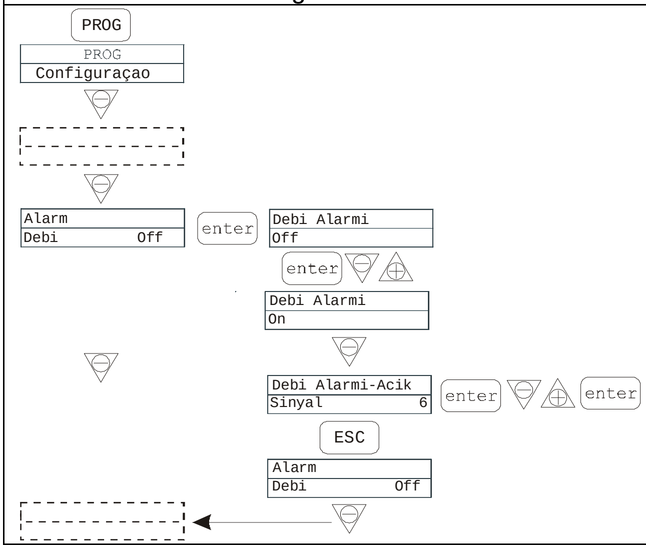
Ana menüde pompanın çalışma süreleri görüntülenir. tuşuna basarak diğer istatistiklere erişebilirsiniz:
- Strokes = pompa tarafından yapılan vuruş sayısı
- Q.ty (L) = pompa tarafından yapılan litre cinsinden dozajlama miktarı; bu sayı, hafıza alınan cc/vuruş değeri esas alınarak hesaplanır
- Power = pompanın başlatılma sayısı
- Reset = tuşlarını kullanarak sayaçları sıfırlayın (YES) veya olduğu gibi bırakın (NO), ardından tuşuna basarak onaylayın.

tuşuna bastığınızda, ana menüye dönersiniz.

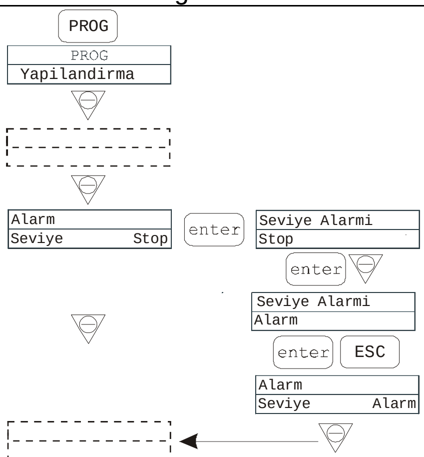
Paragraf 13 – Password (Parola)

Programlama	İşlem
	Parolayı girerek programlama menüsüne girebilir ve ayarlanan tüm değerleri görebilirsiniz. Bu ayarları değiştirmek istediğinizde her defasında parolayı girmeniz istenir. Yanıp sönen çizgi, değiştirilebilen rakamı gösterir. Rakamı (1 ila 9 arasında) seçmek için tuşunu ve değiştirilecek rakamı seçmek için tuşunu kullanın. tuşuna basarak onaylayın. “0000” (varsayılan) ayarlandığında, parola ortadan kaldırılır.

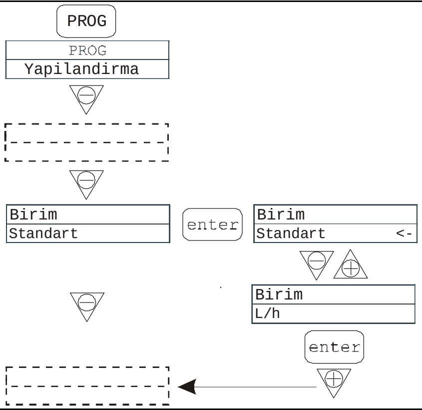
Paragraf 14 – Flow Alarm (Debi Alarmı)

Programlama	İşlem
	Bu ayar, debi sensörünü etkinleştirmeyi (devre dışı bırakmayı) mümkün kılar. Etkinleştirildiğinde (On), bir alarm tetiklenmeden önce pompanın beklediği sinyal sayısı isteğine erişmek için tuşuna basın. tuşuna basıldığında rakam yanıp sönmeye başlar, ardından tuşlarını kullanarak değer ayarlayabilirsiniz. tuşuna basarak onaylayın. Ana menüye dönmek için tuşuna basın

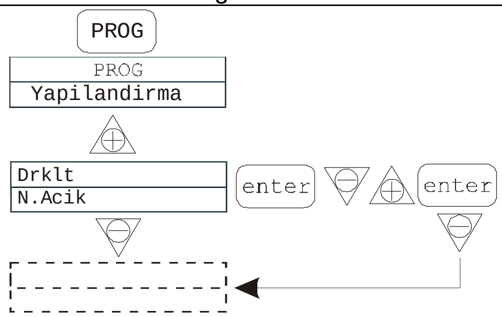
Paragraf 15 – Level Alarm (Düzey Alarmı)

Programlama	İşlem
	Bu ayar, düzey sensörü alarmı etkin durumdayken pompanın ayarlanmasına olanak sağlar. Başka bir deyişle, dozajlamayı durdurmayı (Stop) veya dozajlamayı durdurmadan yalnızca alarm sinyalini etkinleştirmeyi seçebilirsiniz. tuşuna basıp ardından yeni değeri girmek için tuşlarına basılarak değişiklik yapılabilir. tuşuna basarak onaylayın. Ana menüye dönmek için tuşuna basın

Paragraf 16 – Flow Display Unit (Debi Görüntüleme Birimi)

Programlama	İşlem
	Bu ayar, ekranda görüntülenecek dozajlama ölçü biriminin ayarlanmasına olanak sağlar. Değişiklikler, tuşuna basıp ardından ölçü birimini ayarlamak için tuşları ile L/h (litre/saat), Gph (Galon/saat), ml/m (milimetre/dakika) veya standart (ayarlara bağlı olarak % veya frekans) seçenekleri arasından seçim yapıp ölçü birimi ayarlanarak yapılabilir. Onaylamak ve ana menüye dönmek için tuşuna basın

Paragraf 17 - Setting the Pause (Duraklamayı Ayarlama)

Programlama	İşlem
	Pompa, uzaktan giriş ile duraklatılabilir. Fabrika ayarı Normally Open (Normalde Açık) ayarıdır. tuşuna basıp ardından yeni değeri (N. OPEN (N. AÇIK) veya N. CLOSED (N. KAPALI)) girmek için tuşlarına basılarak değişiklik yapılabilir. Onaylamak ve ana menüye dönmek için tuşuna basın

Gosterge Kontrast Ayari

Gostergenin kontrast ayarini degistirmek icin ESC tusuna basili tutun ve 5 saniye icinde arttirmak yada azaltmak icin yada tuslarina basin.

Alarmlar

Ekran	Nedeni	Kesinti
Sabit alarm LED'i **Yanıp sönen "Lev" iletisi** **Örn.** Man Lev P100%	Pompa durdurulmadan düzey alarmının sonlandırılması	Sıvı seviyesini düzeltin.
Sabit alarm LED'i **Yanıp sönen "Lev" ve "stop" iletiler** **Örn.** Man Lev Stop P100%	Pompa durdurularak düzey alarmının sonlandırılması	Sıvı seviyesini düzeltin.
Yanıp sönen "Mem" iletisi **Örn.** 1:n 6 Mem	Bellek işlevi Off (Kapalı) durumdayken pompa bir veya birden çok darbe alır	start stop tuşuna basın
Yanıp sönen "Mem" iletisi **Örn.** 1:n M 6 Mem	Bellek işlevi On (Açık) durumdayken pompa bir veya birden çok darbe alır	Pompa harici darbe alımını bitirdiğinde, hafızaya alınan vuruşlara döner
Sabit alarm LED'i **Yanıp sönen "Flw" iletisi** **Örn.** Man F Flw P100%	Etkin debi alarmı. Pompa, debi sensöründen programlanan sayıda sinyal almamıştır.	start stop tuşuna basın
Örn. Parameter Error PROG to default	Dahili işlemci iletişim hatası.	Varsayılan parametreleri geri yüklemek için PROG tuşuna basın.